86E02F "E25h0260

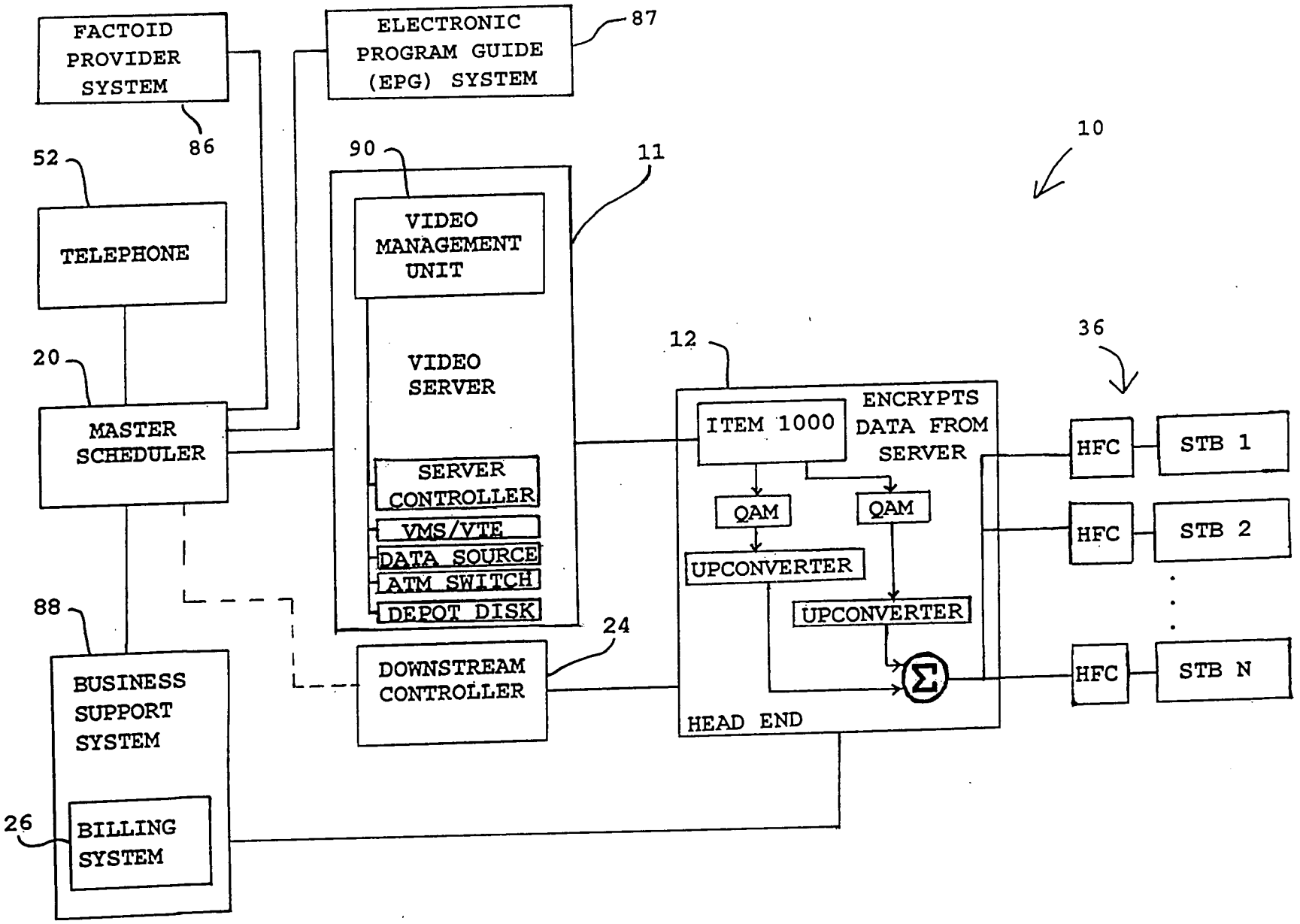


FIG. 1

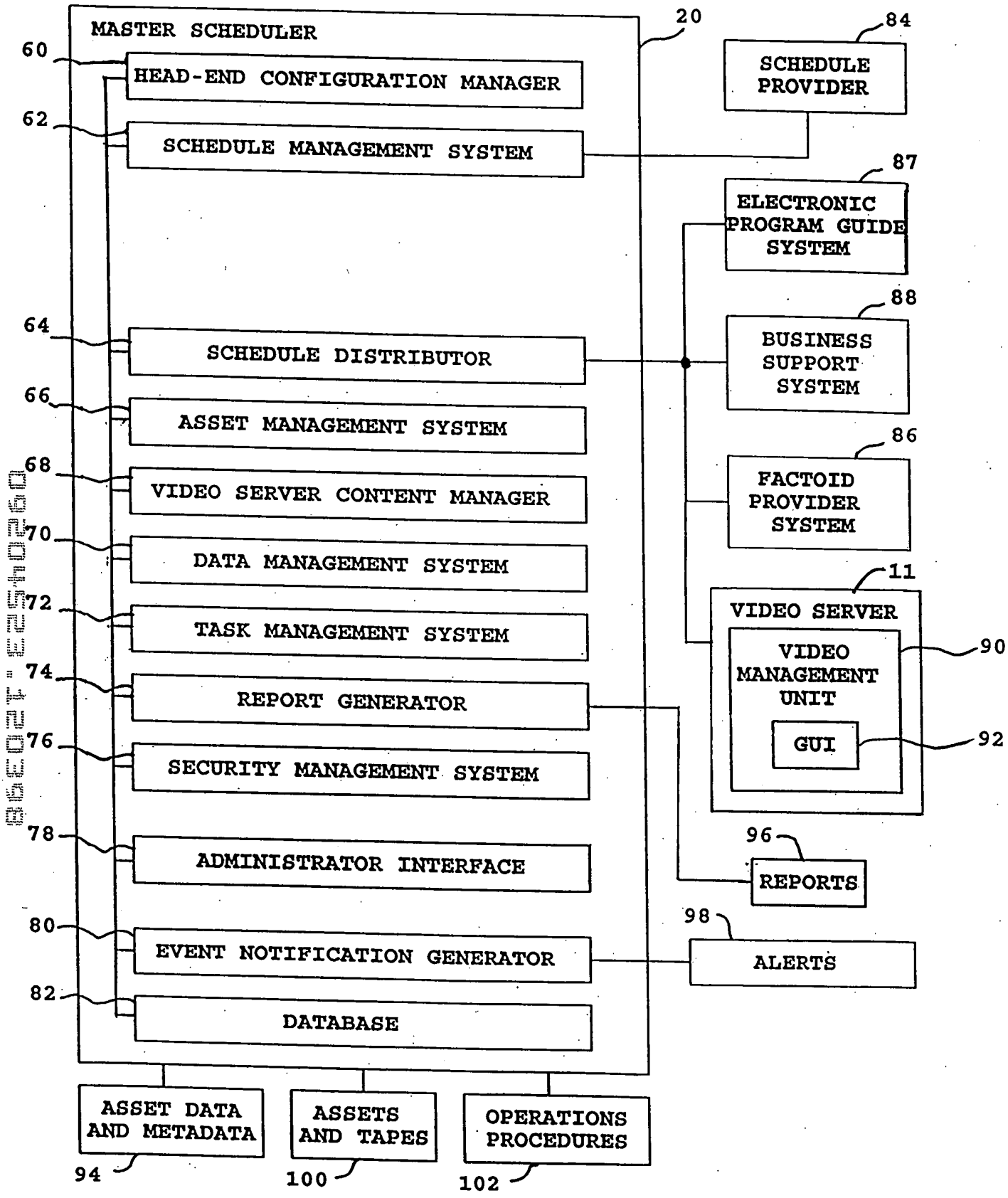

MASTER SCHEDULER
20
60
HEAD-END CONFIGURATION MANAGER
62
SCHEDULE MANAGEMENT SYSTEM
64
SCHEDULE DISTRIBUTOR
66
ASSET MANAGEMENT SYSTEM
68
VIDEO SERVER CONTENT MANAGER
70
DATA MANAGEMENT SYSTEM
72
TASK MANAGEMENT SYSTEM
74
REPORT GENERATOR
76
SECURITY MANAGEMENT SYSTEM
78
ADMINISTRATOR INTERFACE
80
EVENT NOTIFICATION GENERATOR
82
DATABASE
84
SCHEDULE PROVIDER
87
ELECTRONIC PROGRAM GUIDE SYSTEM
88
BUSINESS SUPPORT SYSTEM
86
FACTOID PROVIDER SYSTEM
11
VIDEO SERVER
VIDEO MANAGEMENT UNIT
90
GUI
92
96
REPORTS
98
ALERTS
ASSET DATA AND METADATA
94
ASSETS AND TAPES
100
OPERATIONS PROCEDURES
102

FIG. 2

B6E02T" E25H0260

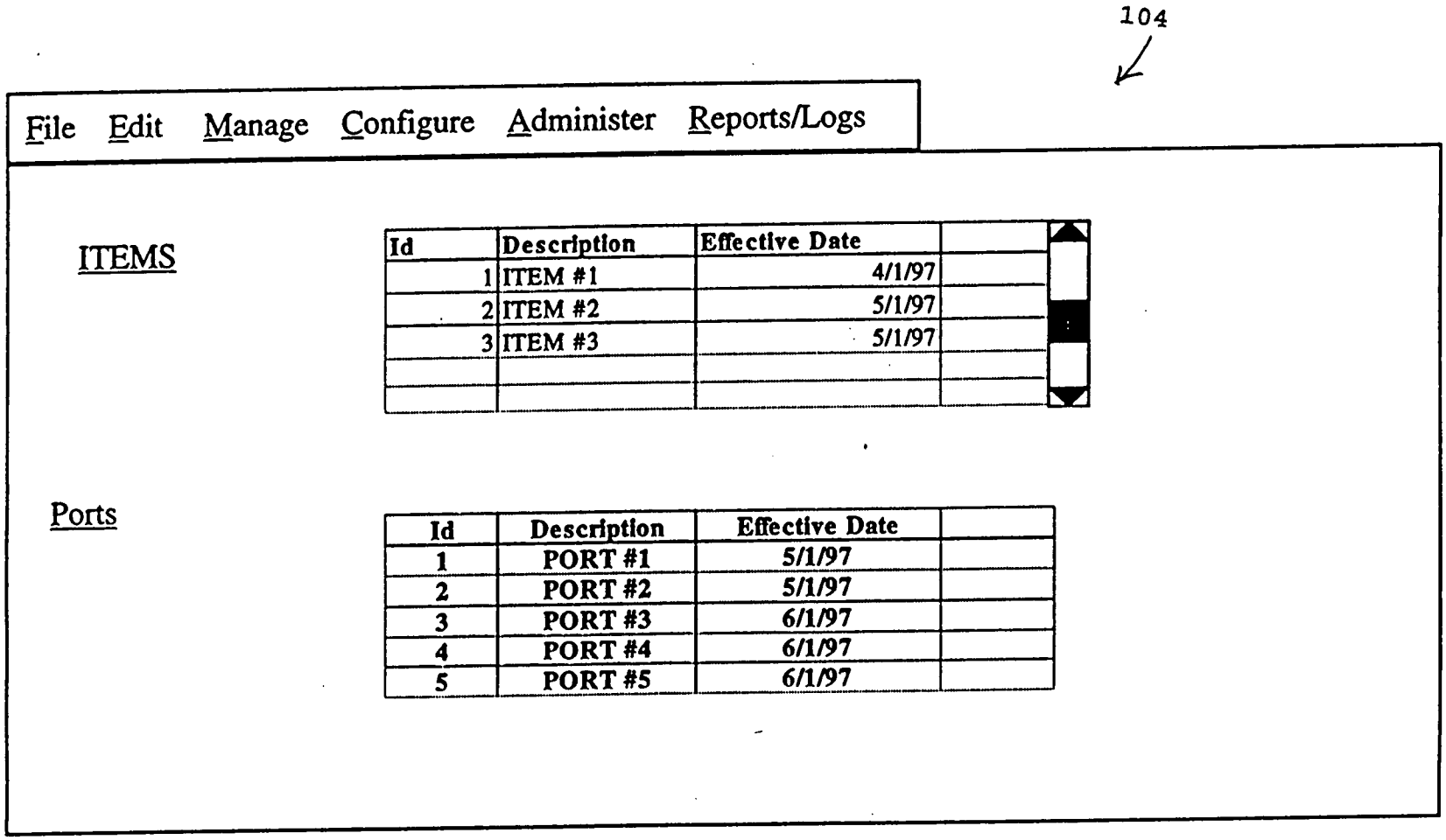


FIG. 3

B6E02T" E25H0260

106

File Edit Manage Configure Administer Reports/Logs

Lineup Name	Lineup Version	Status
Feb Lineup	1	Finalized
March Lineup	4	Being Distributed
April Lineup	1	WIP

Organization	Distributed (Y/N)	Distr. Date	Confirmed (Y/N)	Confirm Date	Remarks
EPG	Y	2/4/97	Y	2/5/97	Phone call from John
BSS	Y	2/5/97	N		Sent a fax

FIG. 4

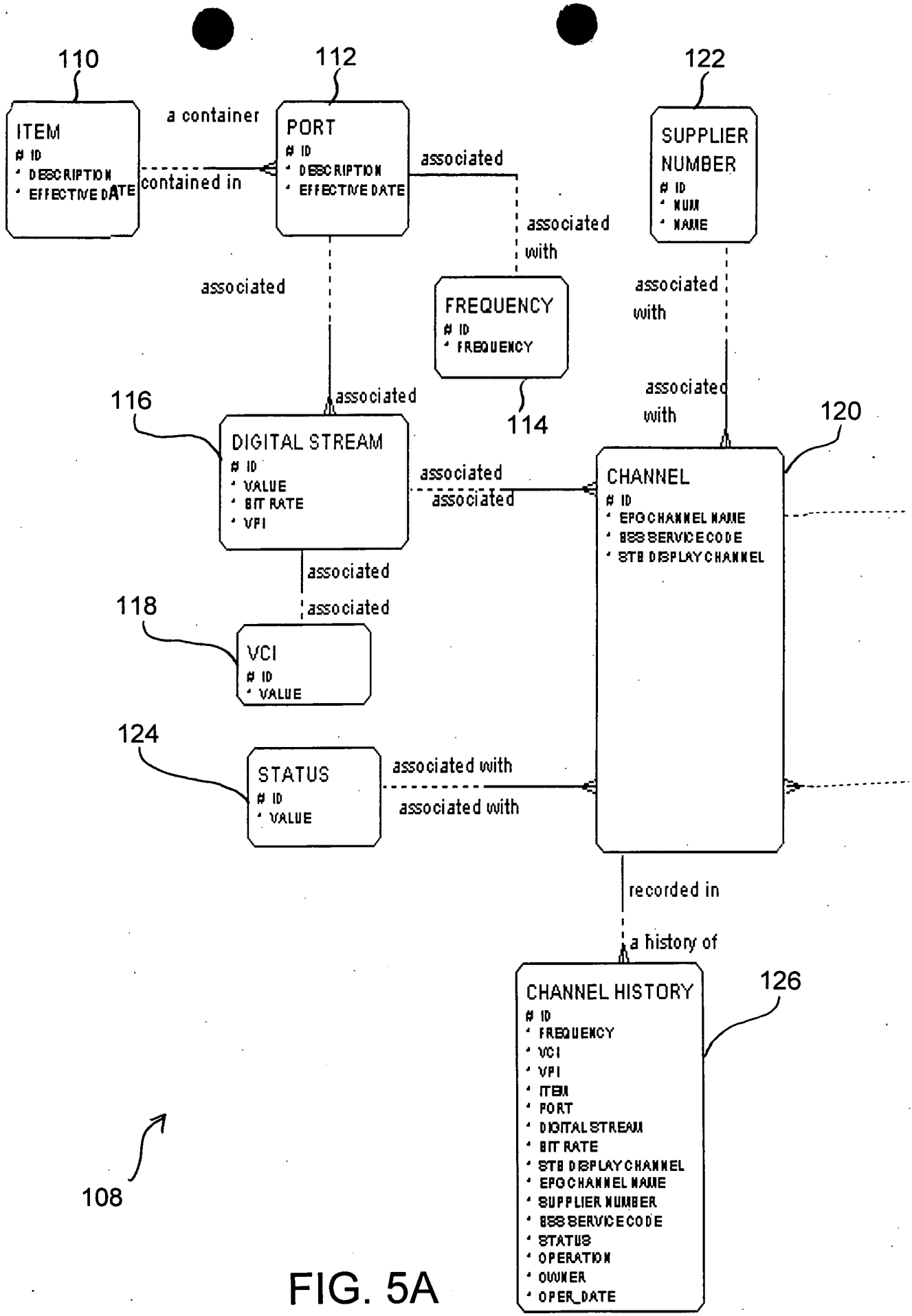


FIG. 5A

09204525.1-2205

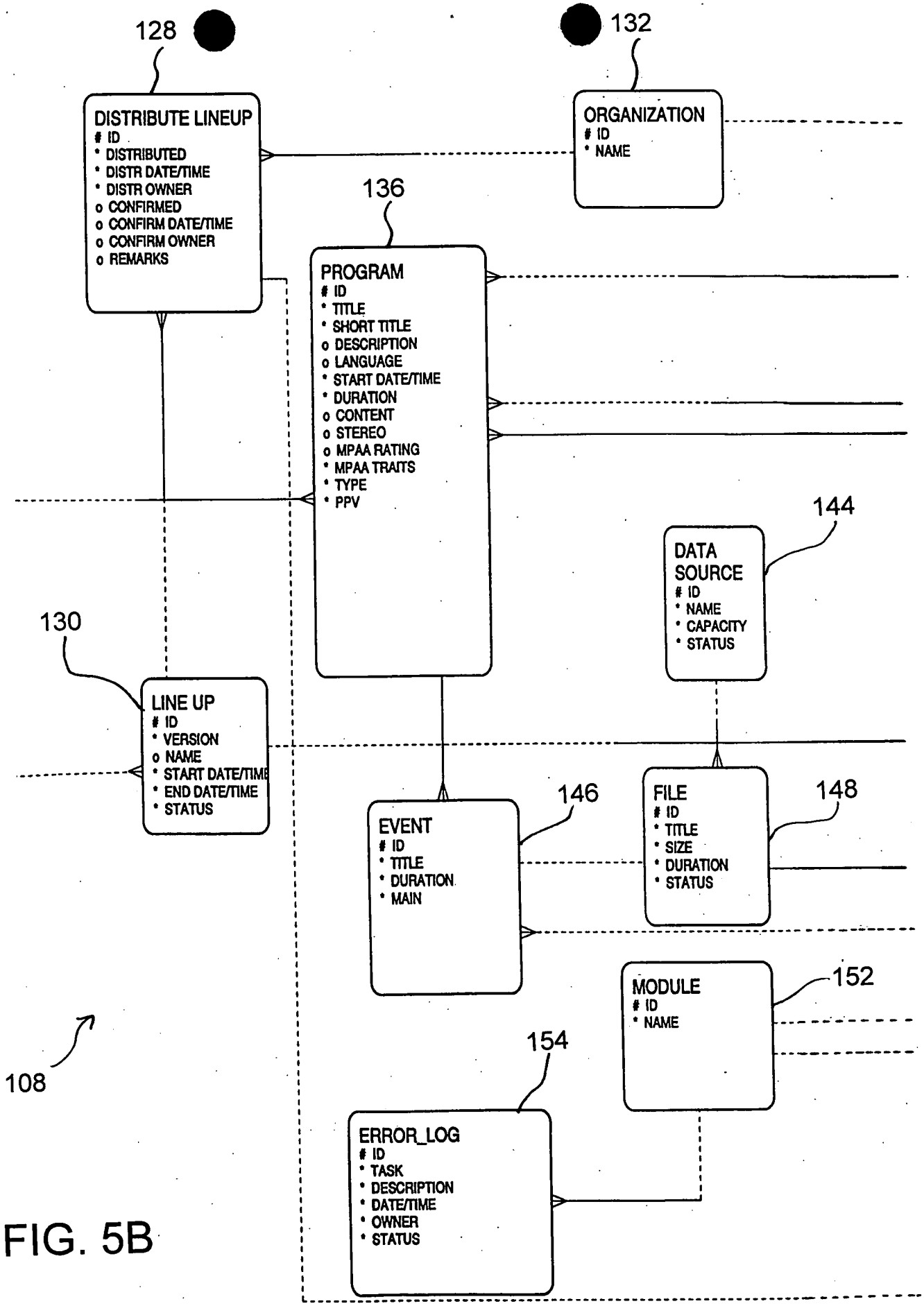

128
132
DISTRIBUTE LINEUP
ID
* DISTRIBUTED
* DISTR DATE/TIME
* DISTR OWNER
o CONFIRMED
o CONFIRM DATE/TIME
o CONFIRM OWNER
o REMARKS
ORGANIZATION
ID
* NAME
136
PROGRAM
ID
* TITLE
* SHORT TITLE
o DESCRIPTION
o LANGUAGE
* START DATE/TIME
* DURATION
o CONTENT
o STEREO
o MPAA RATING
* MPAA TRAITS
* TYPE
* PPV
144
DATA SOURCE
ID
* NAME
* CAPACITY
* STATUS
130
LINE UP
ID
* VERSION
o NAME
* START DATE/TIME
* END DATE/TIME
* STATUS
146
EVENT
ID
* TITLE
* DURATION
* MAIN
FILE
ID
* TITLE
* SIZE
* DURATION
* STATUS
148
MODULE
ID
* NAME
152
154
ERROR_LOG
ID
* TASK
* DESCRIPTION
* DATE/TIME
* OWNER
* STATUS
108

FIG. 5B

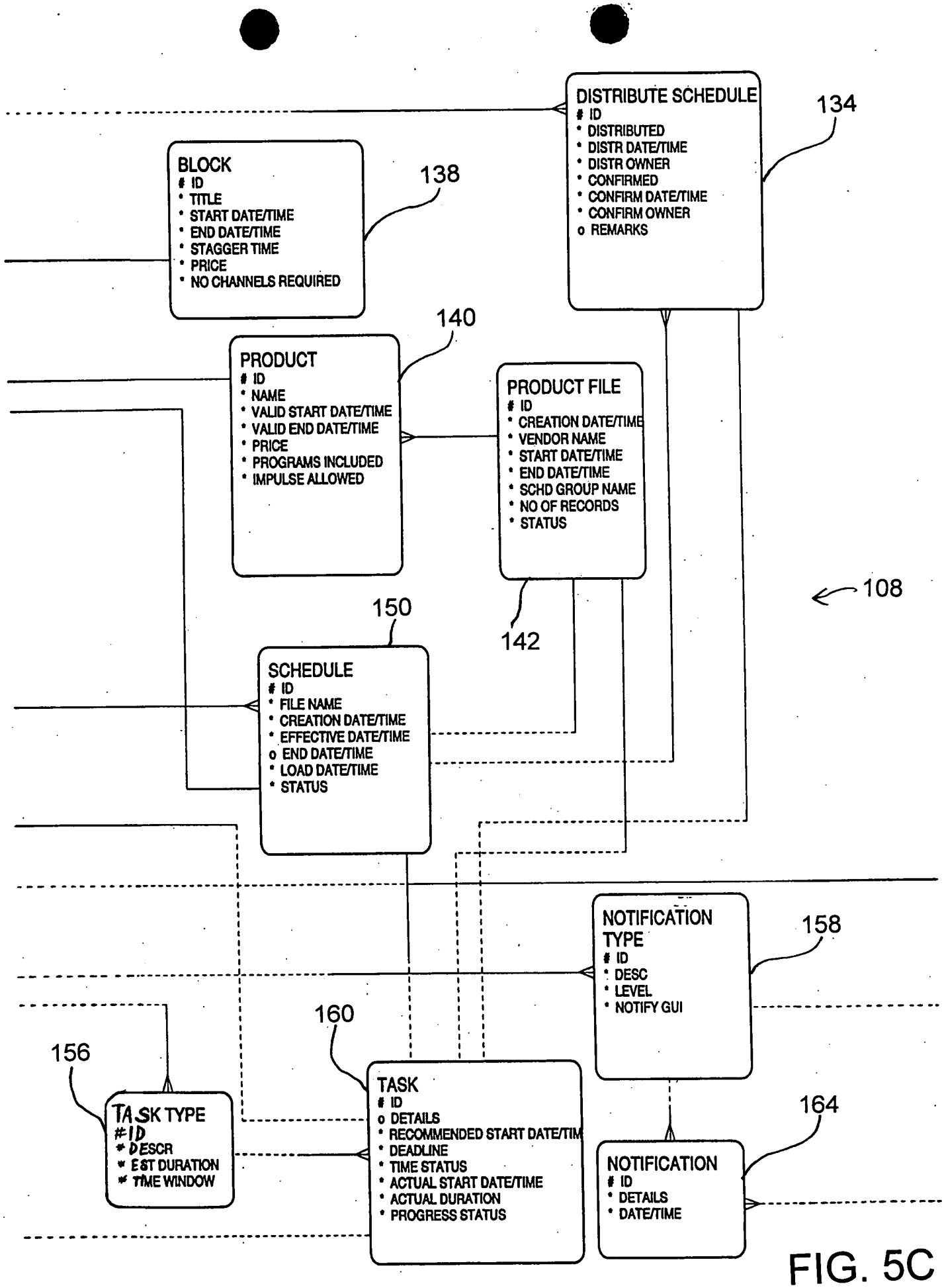

DISTRIBUTE SCHEDULE
ID
* DISTRIBUTED
* DISTR DATE/TIME
* DISTR OWNER
* CONFIRMED
* CONFIRM DATE/TIME
* CONFIRM OWNER
o REMARKS
134
BLOCK
ID
* TITLE
* START DATE/TIME
* END DATE/TIME
* STAGGER TIME
* PRICE
* NO CHANNELS REQUIRED
138
140
PRODUCT
ID
* NAME
* VALID START DATE/TIME
* VALID END DATE/TIME
* PRICE
* PROGRAMS INCLUDED
* IMPULSE ALLOWED
PRODUCT FILE
ID
* CREATION DATE/TIME
* VENDOR NAME
* START DATE/TIME
* END DATE/TIME
* SCHD GROUP NAME
* NO OF RECORDS
* STATUS
142
108
150
SCHEDULE
ID
* FILE NAME
* CREATION DATE/TIME
* EFFECTIVE DATE/TIME
o END DATE/TIME
* LOAD DATE/TIME
* STATUS
NOTIFICATION TYPE
ID
* DESC
* LEVEL
* NOTIFY GUI
158
160
156
TASK TYPE
#ID
* DESCR
* EST DURATION
* TIME WINDOW
TASK
ID
o DETAILS
* RECOMMENDED START DATE/TIM
* DEADLINE
* TIME STATUS
* ACTUAL START DATE/TIME
* ACTUAL DURATION
* PROGRESS STATUS
164
NOTIFICATION
ID
* DETAILS
* DATE/TIME

FIG. 5C

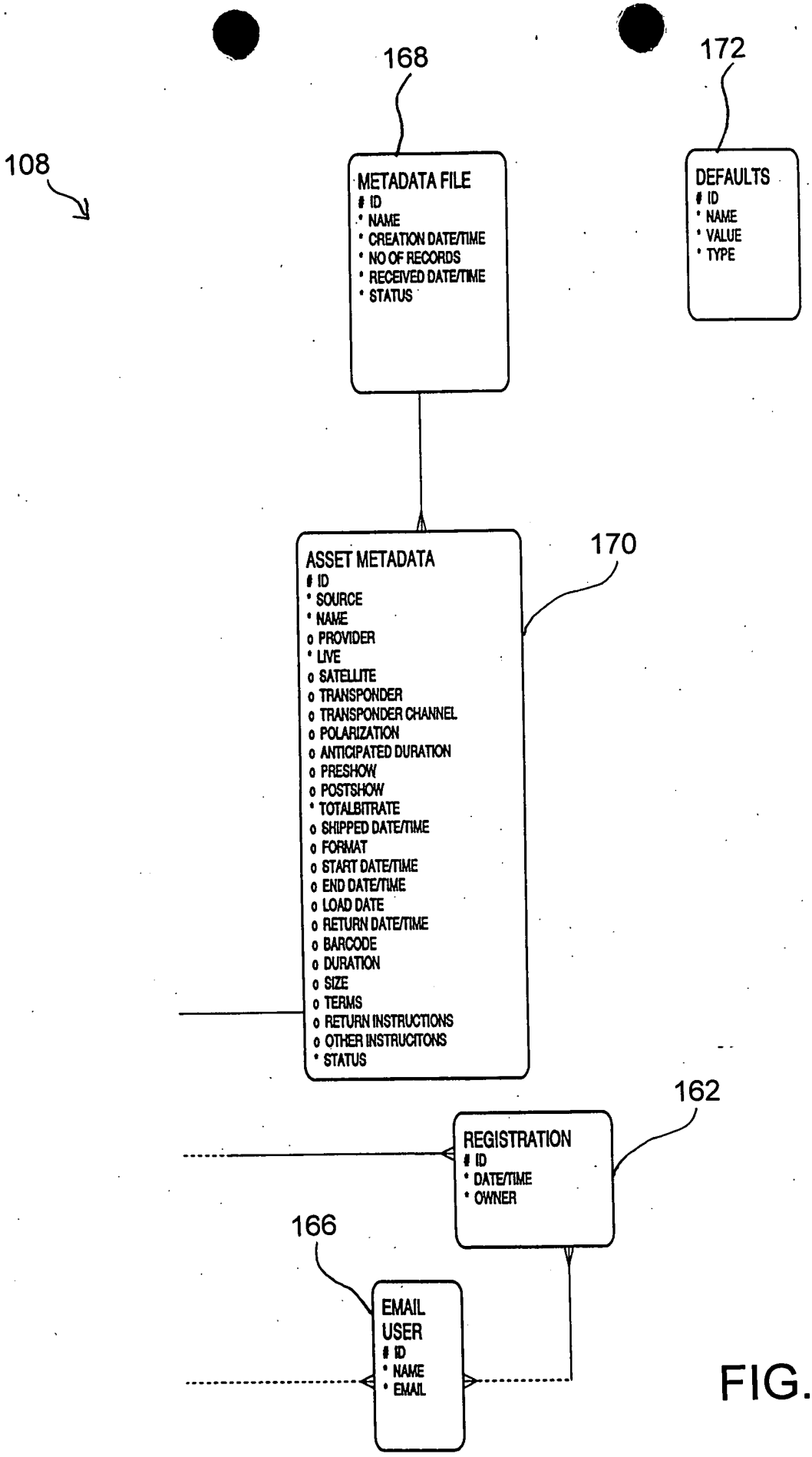

108
168
172
METADATA FILE
ID
* NAME
* CREATION DATE/TIME
* NO OF RECORDS
* RECEIVED DATE/TIME
* STATUS
DEFAULTS
ID
* NAME
* VALUE
* TYPE
170
ASSET METADATA
ID
* SOURCE
* NAME
o PROVIDER
* LIVE
o SATELLITE
o TRANSPONDER
o TRANSPONDER CHANNEL
o POLARIZATION
o ANTICIPATED DURATION
o PRESHOW
o POSTSHOW
* TOTALBITRATE
o SHIPPED DATE/TIME
o FORMAT
o START DATE/TIME
o END DATE/TIME
o LOAD DATE
o RETURN DATE/TIME
o BARCODE
o DURATION
o SIZE
o TERMS
o RETURN INSTRUCTIONS
o OTHER INSTRUCITONS
* STATUS
162
REGISTRATION
ID
* DATE/TIME
* OWNER
166
EMAIL USER
ID
* NAME
* EMAIL

FIG. 5D

```
-- To ensure uniform size of data types, we use some
domains
-- Small Id        - number(4,0)
-- Small Char      - Varchar2(15)
-- Med Char        - Varchar2(100)
-- Date            - Date

CREATE TABLE items (
id                  number(4,0) primary key,
description         varchar2(100) not null,
effective_date      date not null
);

CREATE TABLE frequencies (
id                  number(4,0) primary key,
frequency           number(4,0) not null     -- in MHz
);

CREATE TABLE ports (
id                  number(4,0) primary key,
description         varchar2(100) not null,
effective_date      date not null,
freq_id  number(4,0) not null references frequencies,
item_id             number(4,0) not null references items
);

CREATE TABLE digital_streams (
id                  number(4,0) primary key,
value               number(4,0) not null,
bit_rate            archar2(15) not null,
vpi                 number(4,0) not null,
port_id             number(4,0) not null references ports,
vci_id              number(4,0) not null references vci
);

CREATE TABLE supplier_numbers (
id                  number(4,0) primary key,
value               number(4,0) not null,
name                varchar2(15) not null
);

CREATE TABLE vci (
id                  number(4,0) primary key,
value               number(4,0) not null
);

CREATE TABLE status (
id                  number(4,0) primary key,
value               varchar2(15) not null
);

CREATE TABLE channels(
id                  number(4,0) primary key,
epg_channel_name        varchar2(100) not null,
bss_service_code        number(6,0) not null,
stb_display_channel     number(4,0) not null,
dig_stream_id   number(4,0) not null references digital_streams,
sup_num_id      number(4,0) not null references supplier_numbers,
stat_id         number(4,0) not null references status
);

CREATE TABLE line_ups (
id                  number(4,0) primary key,
name                varchar2(15) not null,
version             varchar2(15) not null,
start_date_time date,
end_date_time   date,
stat_id         number(4,0) not null references status
);
```

FIG. 6

Analog Frequency	VCI (33→1024)	VPI (fixed)	ITEM #	ITEM Port	Digital stream	Bit Rate	STB LED channel display	EPG channel name	ITC PAL file name	Supplier number	Relative channel number	BSS Service Code	Service Handle (code +32K)
666 MHz	33	0	1	1	1	4.5Mbps	201	A101	V026mmyy	026	1	801	33569
666 MHz	34	0	1	1	2	4.5Mbps	202	A102	V026mmyy	026	2	802	33570
666 MHz	35	0	1	1	3	4.5Mbps	203	A103	V026mmyy	026	3	803	33571
666 MHz	36	0	1	1	4	4.5Mbps	204	A104	V026mmyy	026	4	804	33572
666 MHz	37	0	1	1	5	4.5Mbps	205	A105	V026mmyy	026	5	805	33573
672 MHz	38	0	1	2	1	4.5Mbps	206	A106	V027mmyy	027	1	806	33574
672 MHz	39	0	1	2	2	4.5Mbps	207	A107	V027mmyy	027	2	807	33575
672 MHz	40	0	1	2	3	4.5Mbps	208	A108	V027mmyy	027	3	808	33576
672 MHz	41	0	1	2	4	4.5Mbps	209	A109	V027mmyy	027	4	809	33577
672 MHz	42	0	1	2	5	4.5Mbps	210	A110	V027mmyy	027	5	810	33578
678 MHz	43	0	1	3	1	4.5Mbps	211	A111	V028mmyy	028	1	811	33579
678 MHz	44	0	1	3	2	4.5Mbps	212	A112	V028mmyy	028	2	812	33580
678 MHz	45	0	1	3	3	4.5Mbps	213	A113	V028mmyy	028	3	813	33581
678 MHz	46	0	1	3	4	4.5Mbps	214	A114	V028mmyy	028	4	814	33582
678 MHz	47	0	1	3	5	4.5Mbps	215	A115	V028mmyy	028	5	815	33583
684 MHz	48	0	1	4	1	4.5Mbps	216	A116	V029mmyy	029	1	816	33584
684 MHz	49	0	1	4	2	4.5Mbps	217	A117	V029mmyy	029	2	817	33585
684 MHz	50	0	1	4	3	4.5Mbps	218	A118	V029mmyy	029	3	818	33586
684 MHz	51	0	1	4	4	4.5Mbps	219	A119	V029mmyy	029	4	819	33587
684 MHz	52	0	1	4	5	4.5Mbps	220	A120	V029mmyy	029	5	820	33588
690 MHz	53	0	1	5	1	4.5Mbps	221	A121	V030mmyy	030	1	821	33589
690 MHz	54	0	1	5	2	4.5Mbps	222	A122	V030mmyy	030	2	822	33590
690 MHz	55	0	1	5	3	4.5Mbps	223	A123	V030mmyy	030	3	823	33591
690 MHz	56	0	1	5	4	4.5Mbps	224	A124	V030mmyy	030	4	824	33592
690 MHz	57	0	1	5	5	4.5Mbps	225	A125	V030mmyy	030	5	825	33593

FIG. 7

HEADER Record
SERVICE (Channel) Record
PROGRAM Record
EVENT Record
EVENT Record
EVENT Record
SERVICE (Channel) Record
PROGRAM Record

FIG. 8

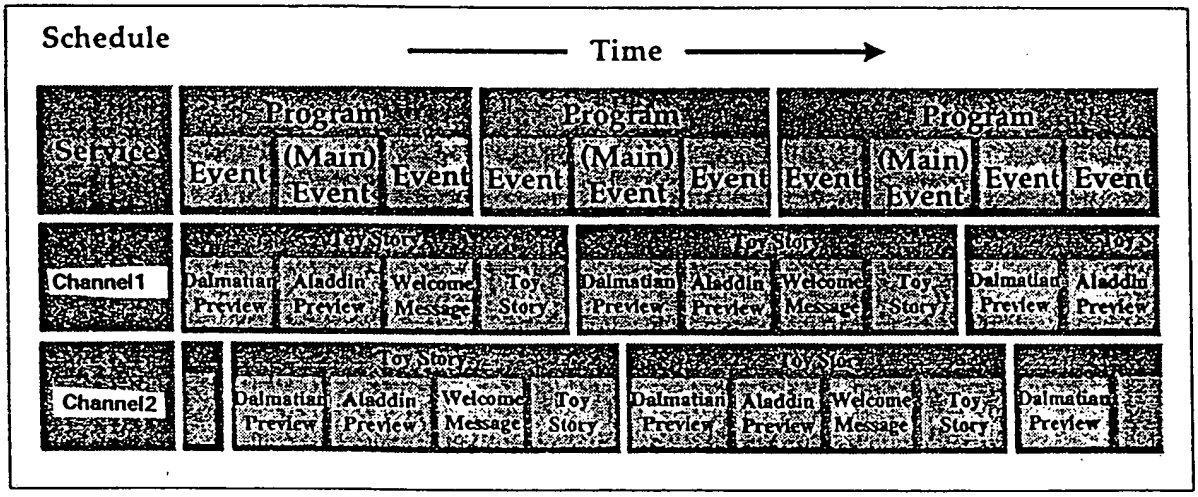


FIG. 9

86E02T" E25h0260

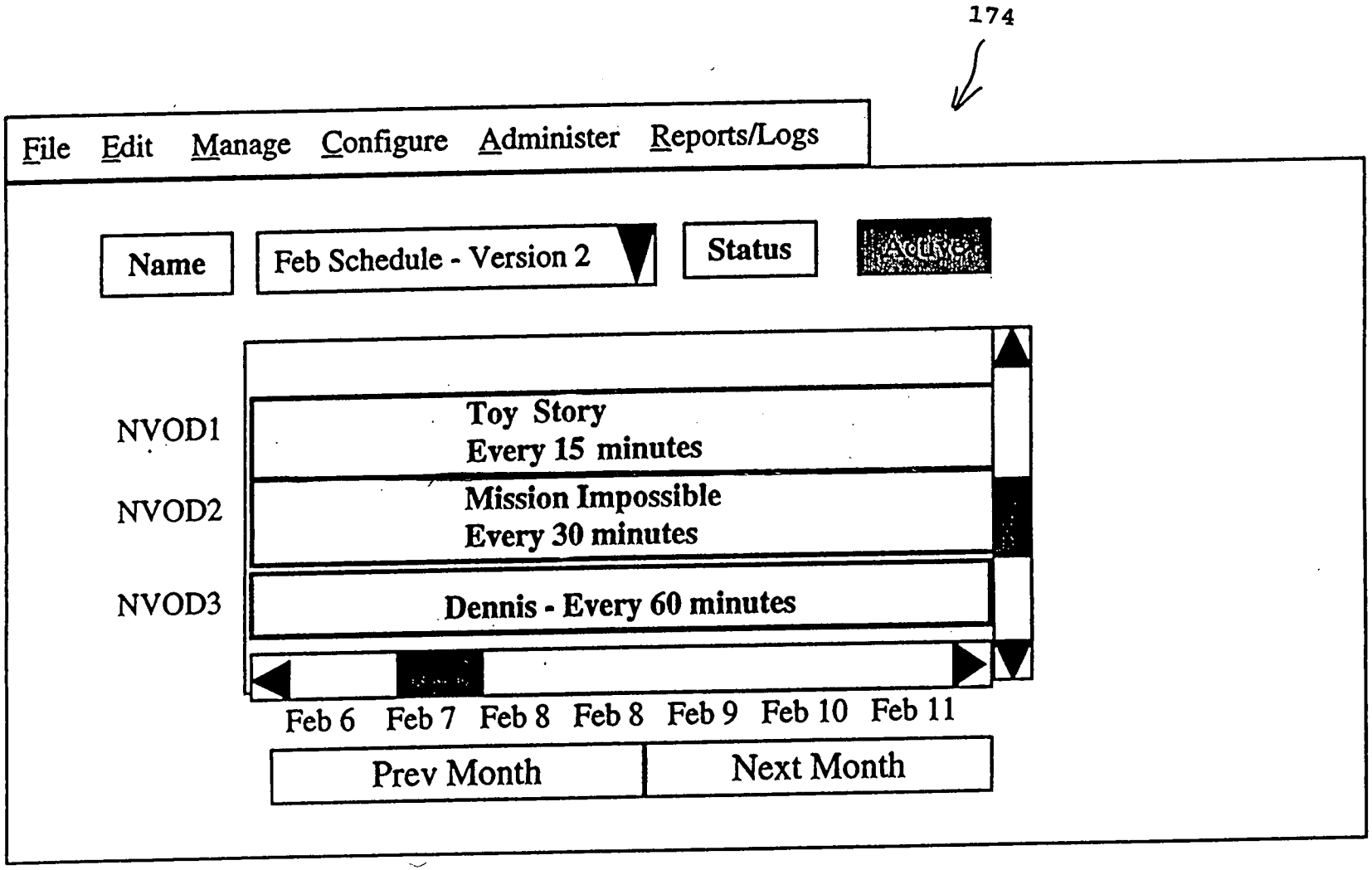


FIG. 10

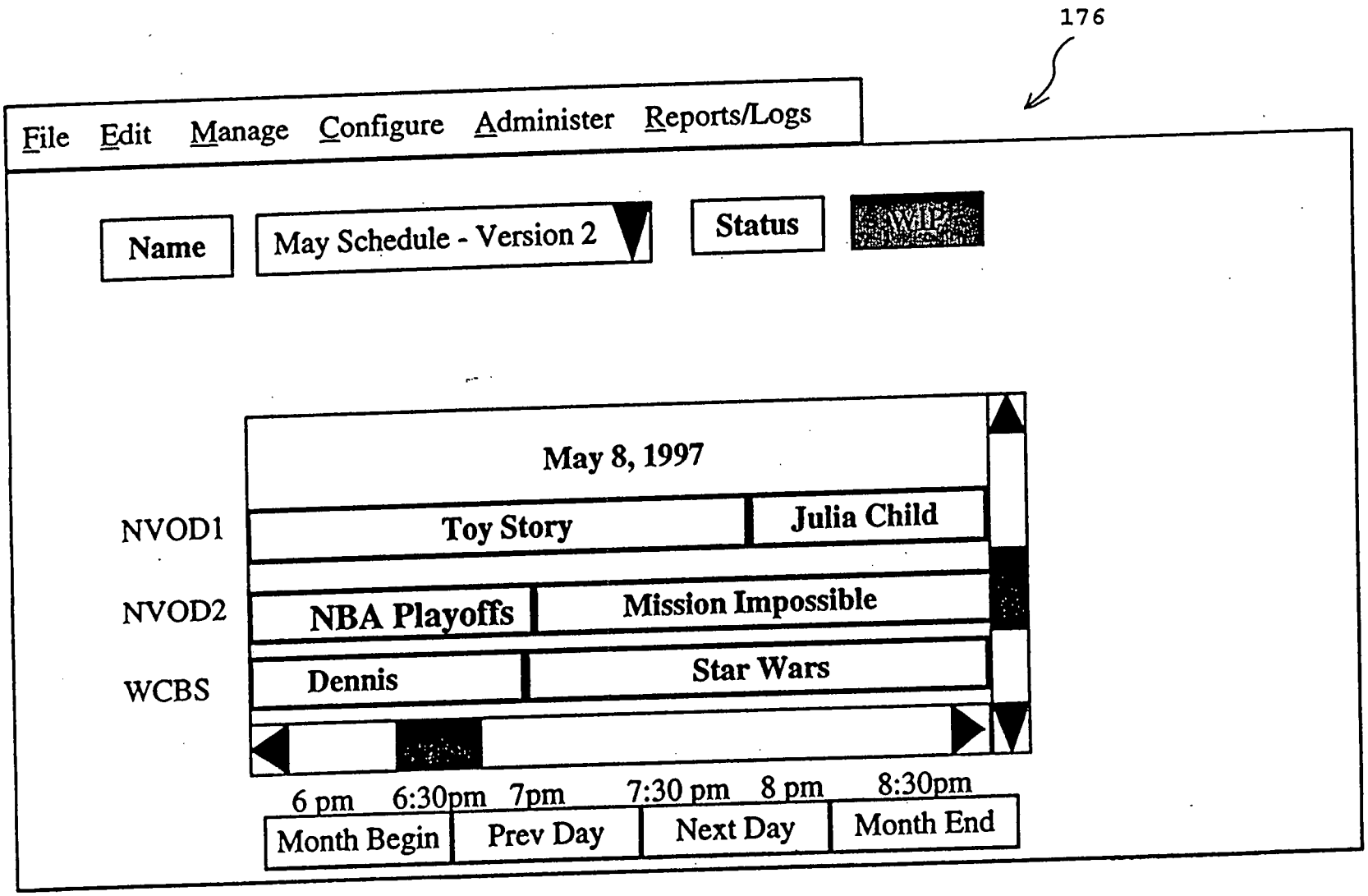

176
File Edit Manage Configure Administer Reports/Logs
Name
May Schedule - Version 2
Status
WIP
May 8, 1997
NVOD1
Toy Story
Julia Child
NVOD2
NBA Playoffs
Mission Impossible
WCBS
Dennis
Star Wars
6 pm
6:30pm
7pm
7:30 pm
8 pm
8:30pm
Month Begin
Prev Day
Next Day
Month End

FIG. 11

86E02T" E25h0260

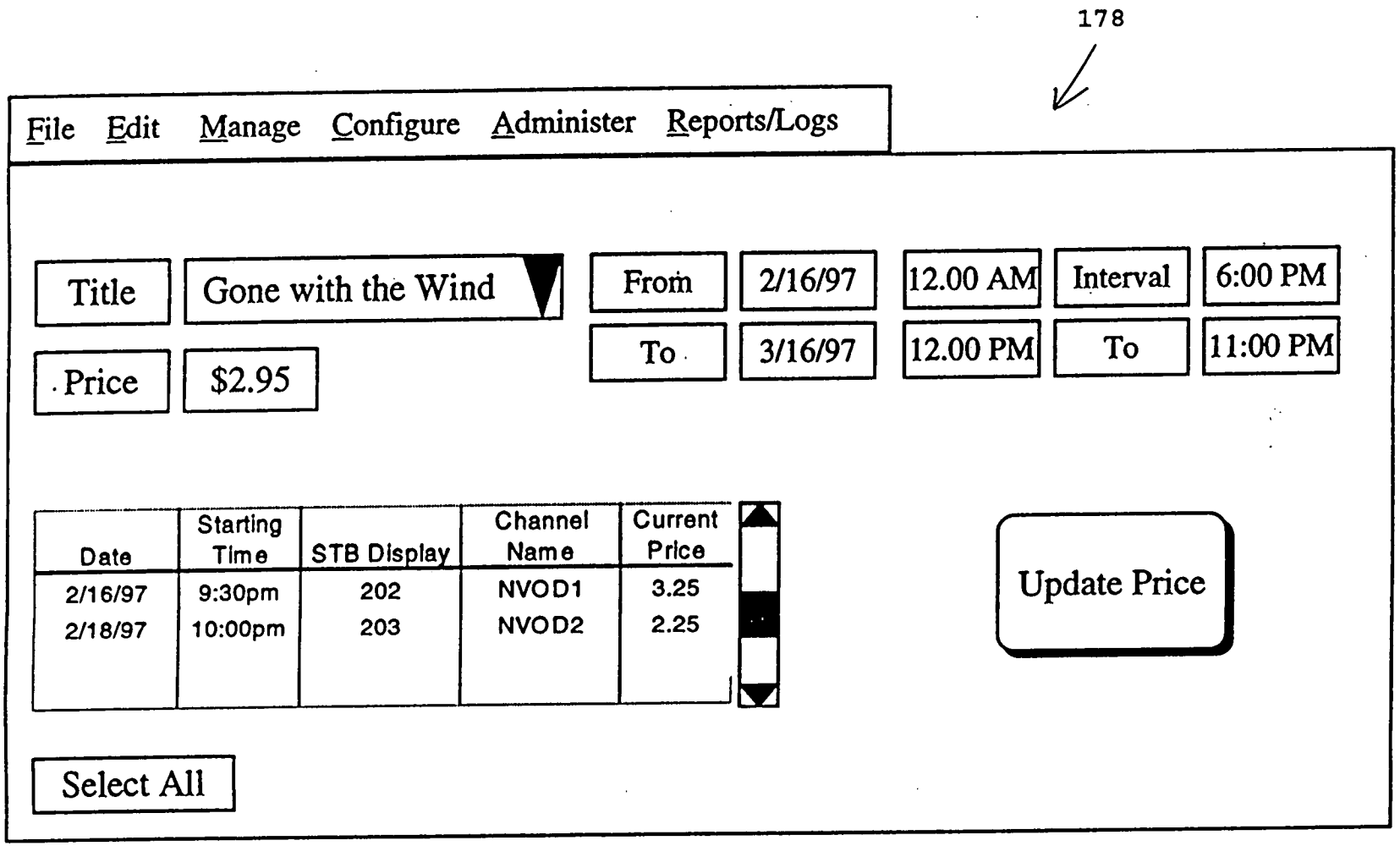


FIG. 12

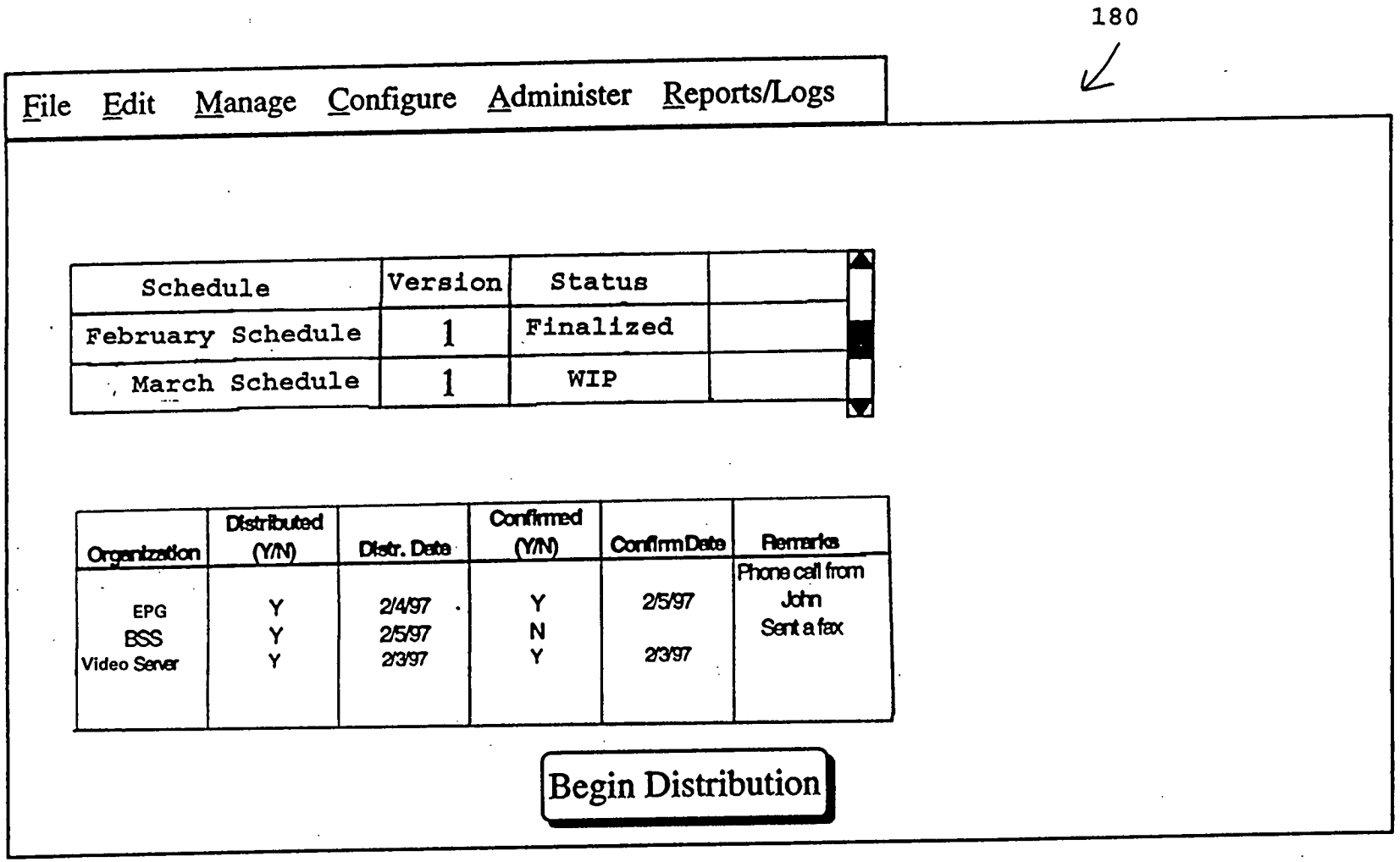

180
File Edit Manage Configure Administer Reports/Logs
Schedule | Version | Status
February Schedule | 1 | Finalized
March Schedule | 1 | WIP
Organization | Distributed (Y/N) | Distr. Date | Confirmed (Y/N) | Confirm Date | Remarks
EPG | Y | 2/4/97 | Y | 2/5/97 | Phone call from John
BSS | Y | 2/5/97 | N | | Sent a fax
Video Server | Y | 2/3/97 | Y | 2/3/97 |
Begin Distribution

FIG. 13

BGE02T" E25h0260

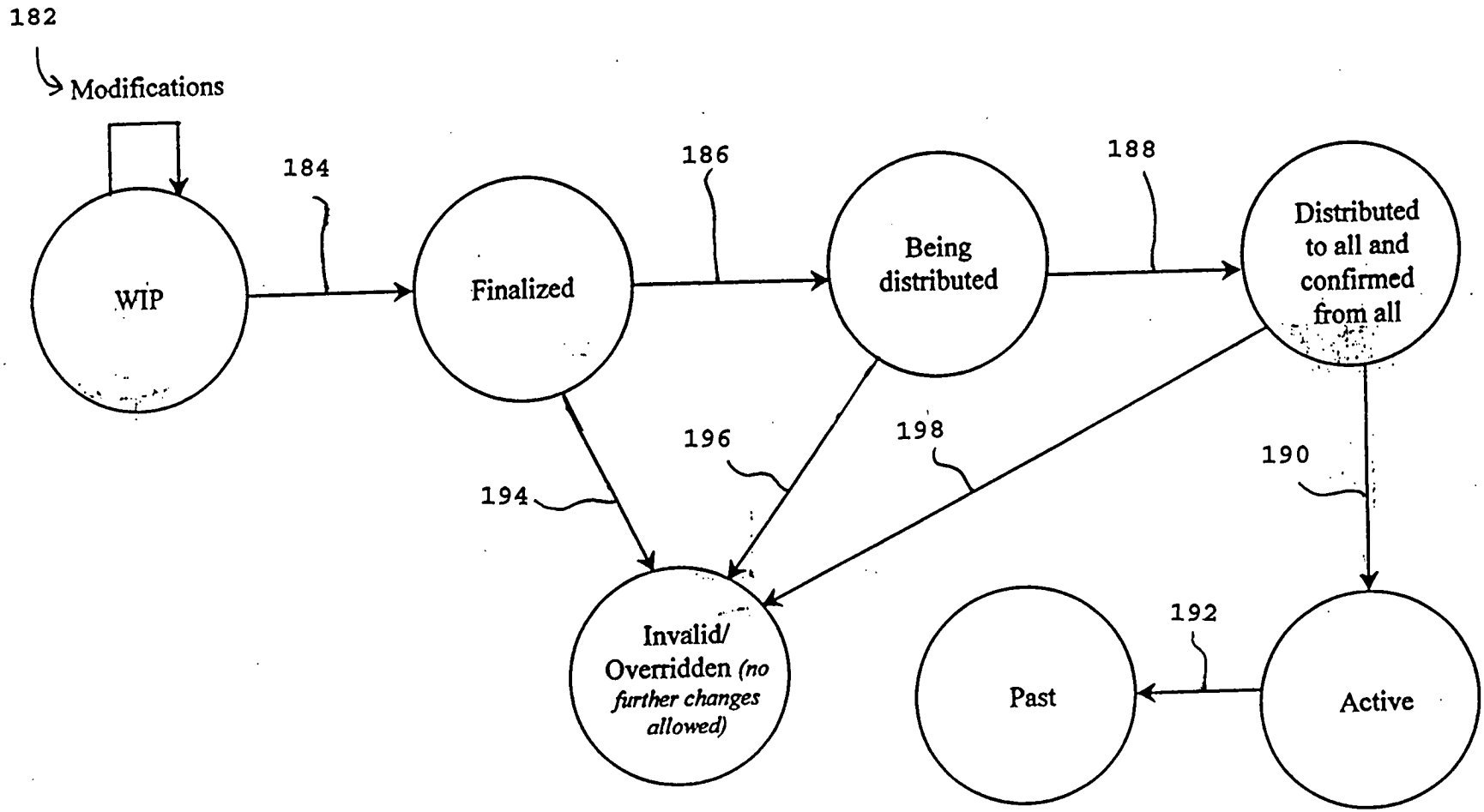


FIG. 14

86E027 " 225h0260

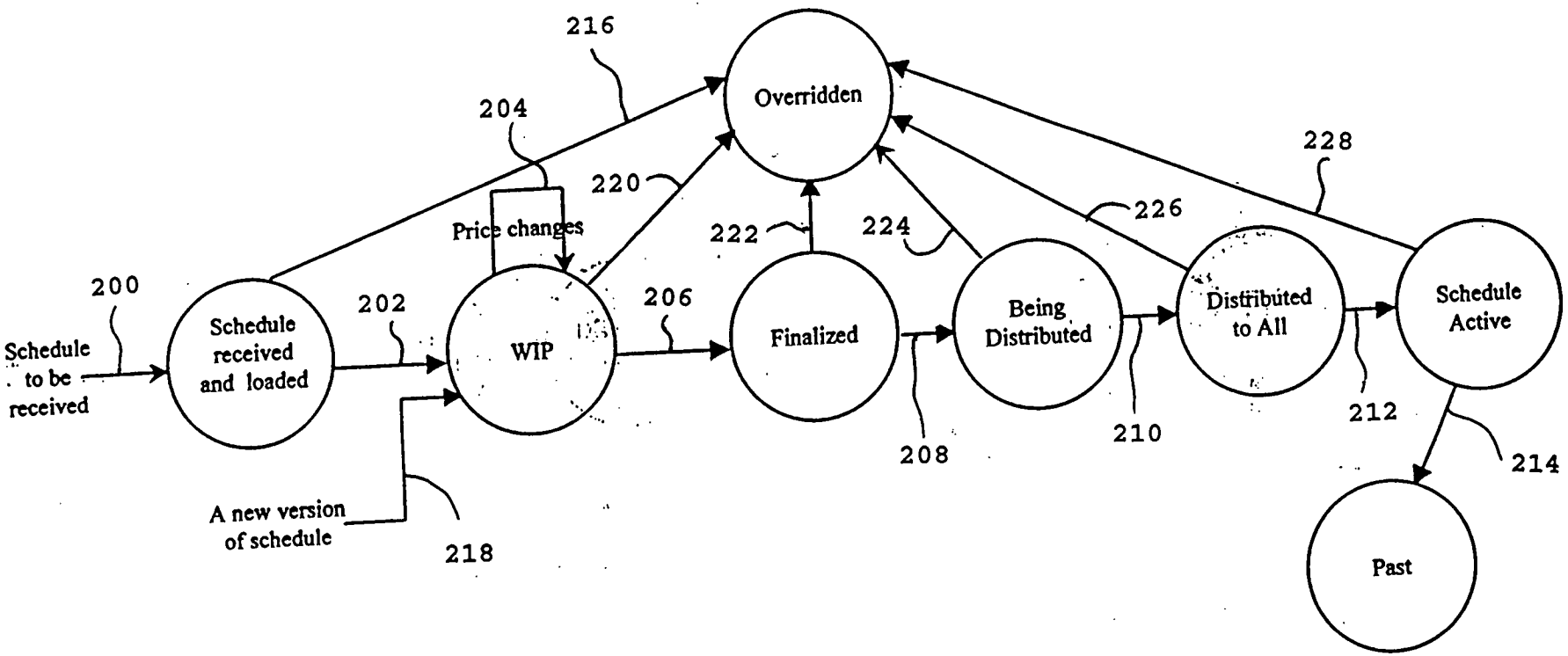


FIG. 15

09/955,268 - 03/05/2004

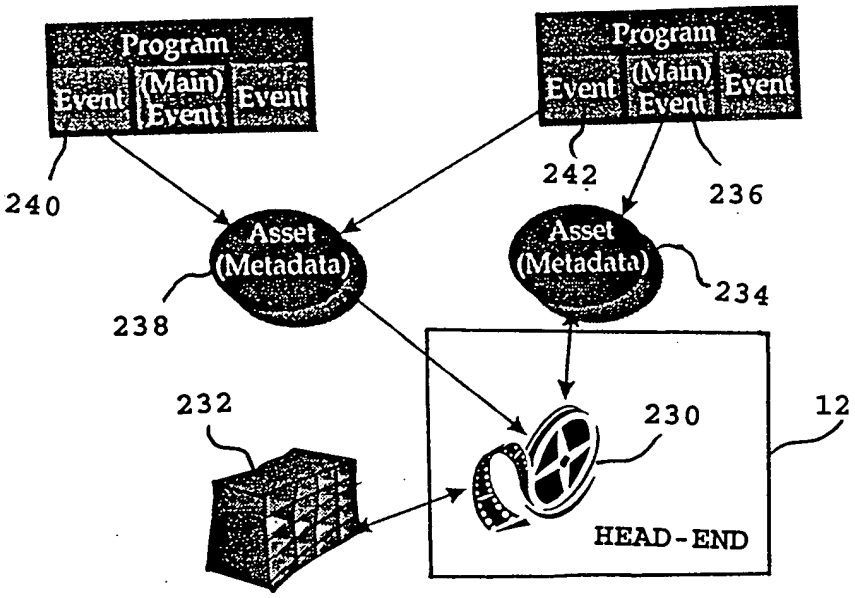


FIG. 16

HEADER Record
ASSET METADATA Record
ASSET EVENT Record
ASSET EVENT Record
ASSET EVENT Record
ASSET METADATA Record
ASSET EVENT Record

FIG. 17

86E02T" E25h0260

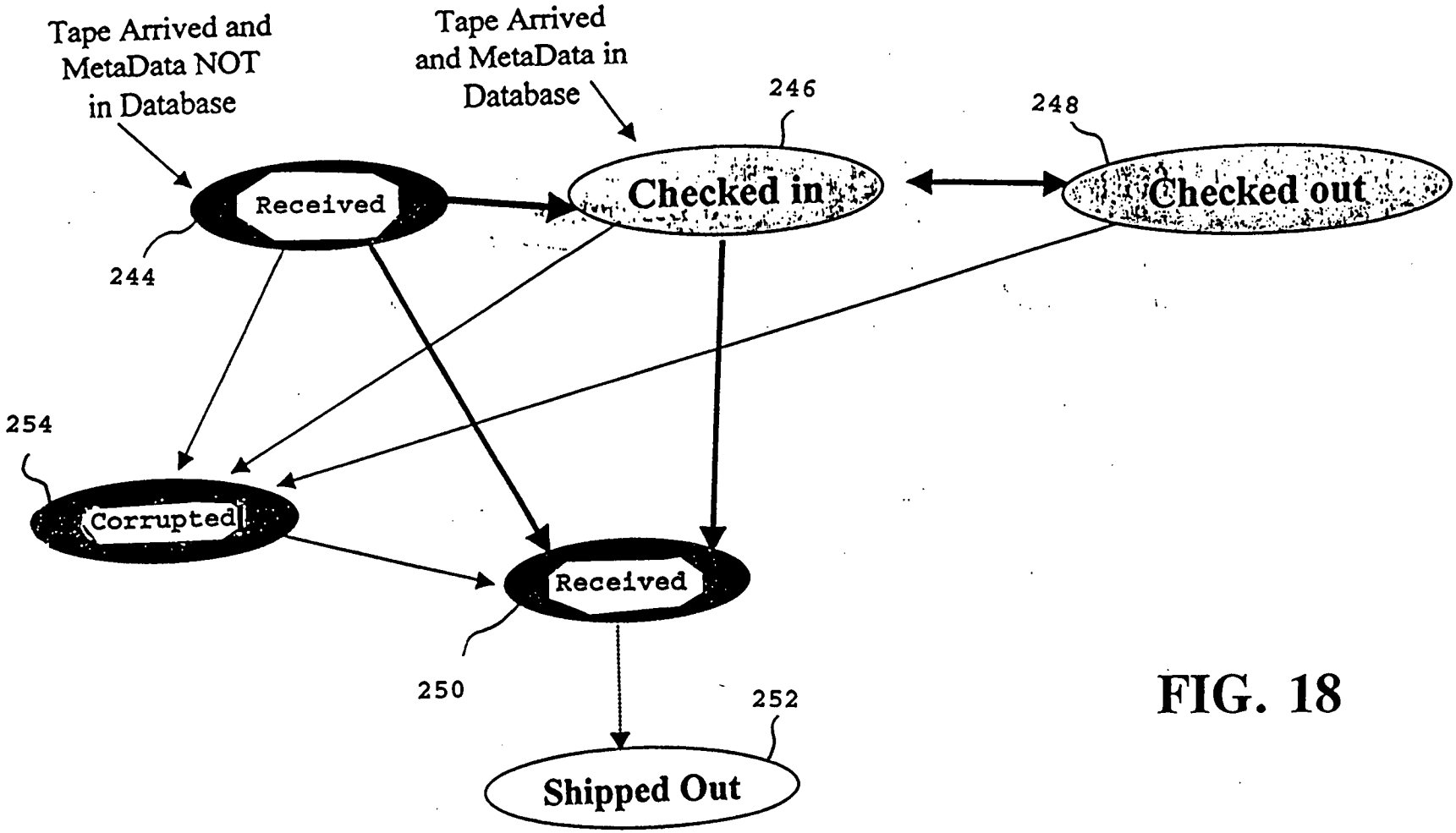


FIG. 18

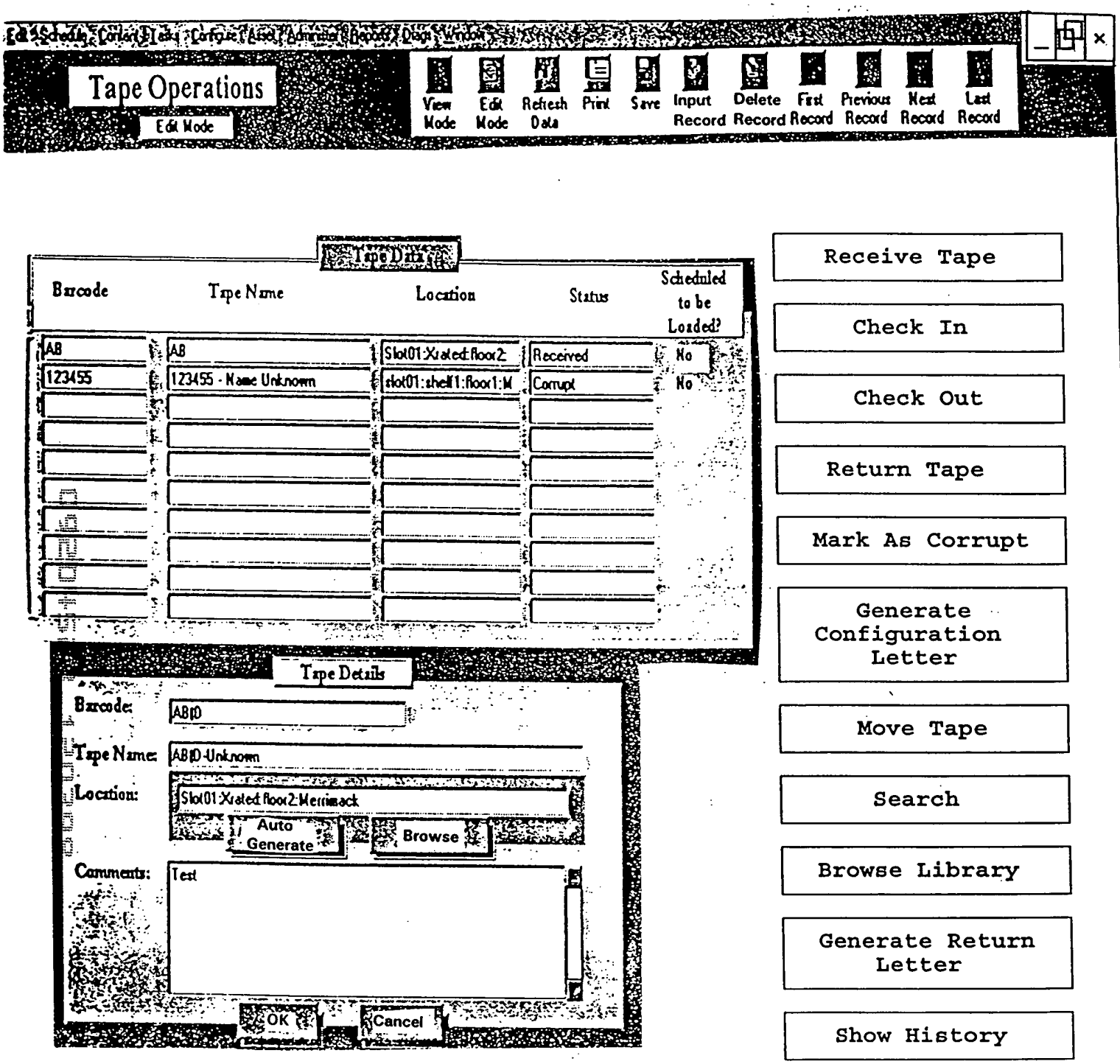

Tape Operations
Edit Mode
View Mode
Edit Mode
Refresh Data
Print
Save
Input Record
Delete Record
First Record
Previous Record
Next Record
Last Record
Tape Data
Barcode
Tape Name
Location
Status
Scheduled to be Loaded?
AB
AB
Slot01:X-rated:floor2:
Received
No
123455
123455 - Name Unknown
slot01:shelf1:floor1:M
Corrupt
No
Tape Details
Barcode:
ABfD
Tape Name:
ABfD-Unknown
Location:
Slot01:X-rated:floor2:Merrimack
Auto Generate
Browse
Comments:
Test
OK
Cancel
Receive Tape
Check In
Check Out
Return Tape
Mark As Corrupt
Generate Configuration Letter
Move Tape
Search
Browse Library
Generate Return Letter
Show History
Show Asset MetaData

FIG. 19

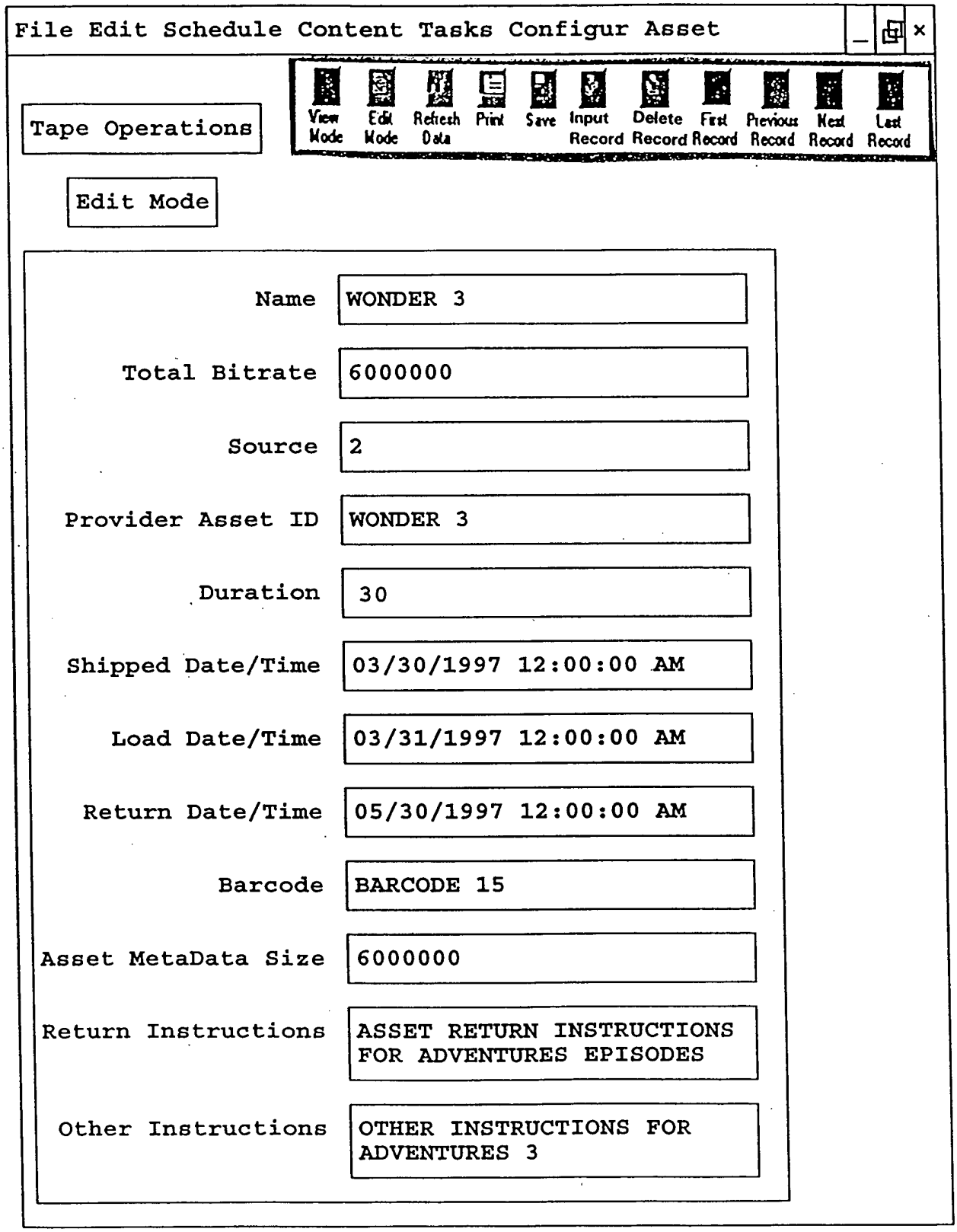

File Edit Schedule Content Tasks Configur Asset
View Mode
Edit Mode
Refresh Data
Print
Save
Input Record
Delete Record
First Record
Previous Record
Next Record
Last Record
Tape Operations
Edit Mode
Name
WONDER 3
Total Bitrate
6000000
Source
2
Provider Asset ID
WONDER 3
Duration
30
Shipped Date/Time
03/30/1997 12:00:00 AM
Load Date/Time
03/31/1997 12:00:00 AM
Return Date/Time
05/30/1997 12:00:00 AM
Barcode
BARCODE 15
Asset MetaData Size
6000000
Return Instructions
ASSET RETURN INSTRUCTIONS FOR ADVENTURES EPISODES
Other Instructions
OTHER INSTRUCTIONS FOR ADVENTURES 3

FIG. 20

86E02T*E25H0260

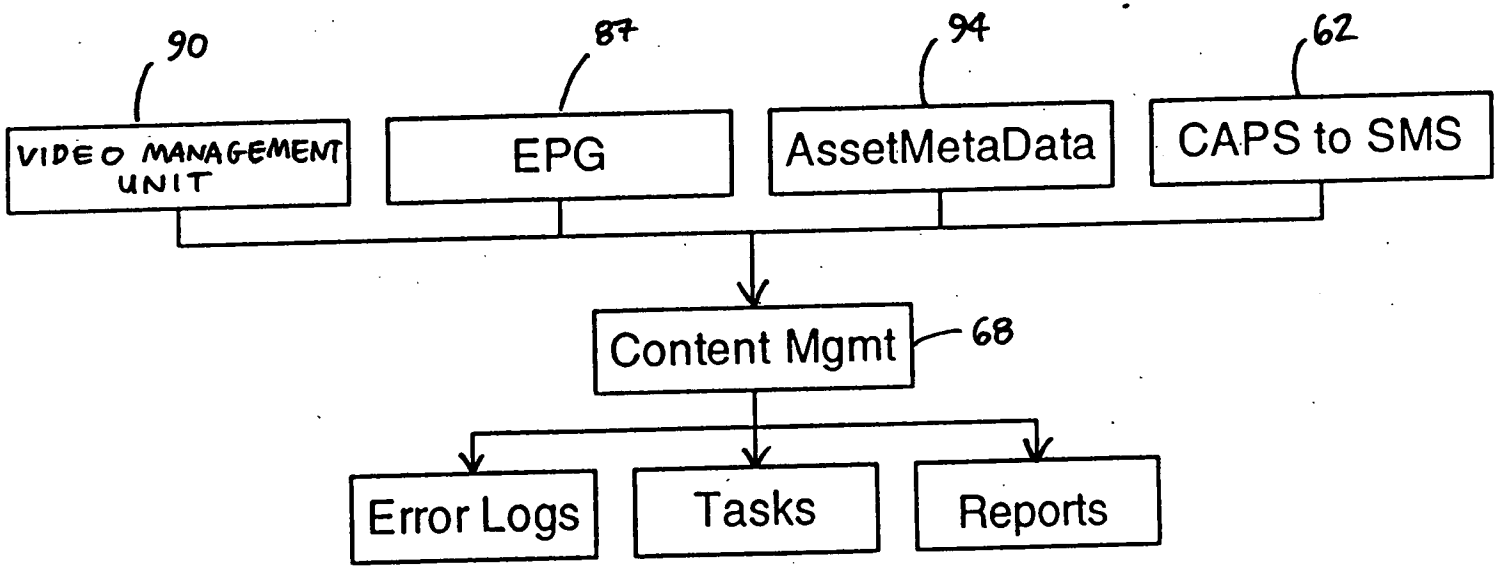


FIG. 21

86E02T "25h0260

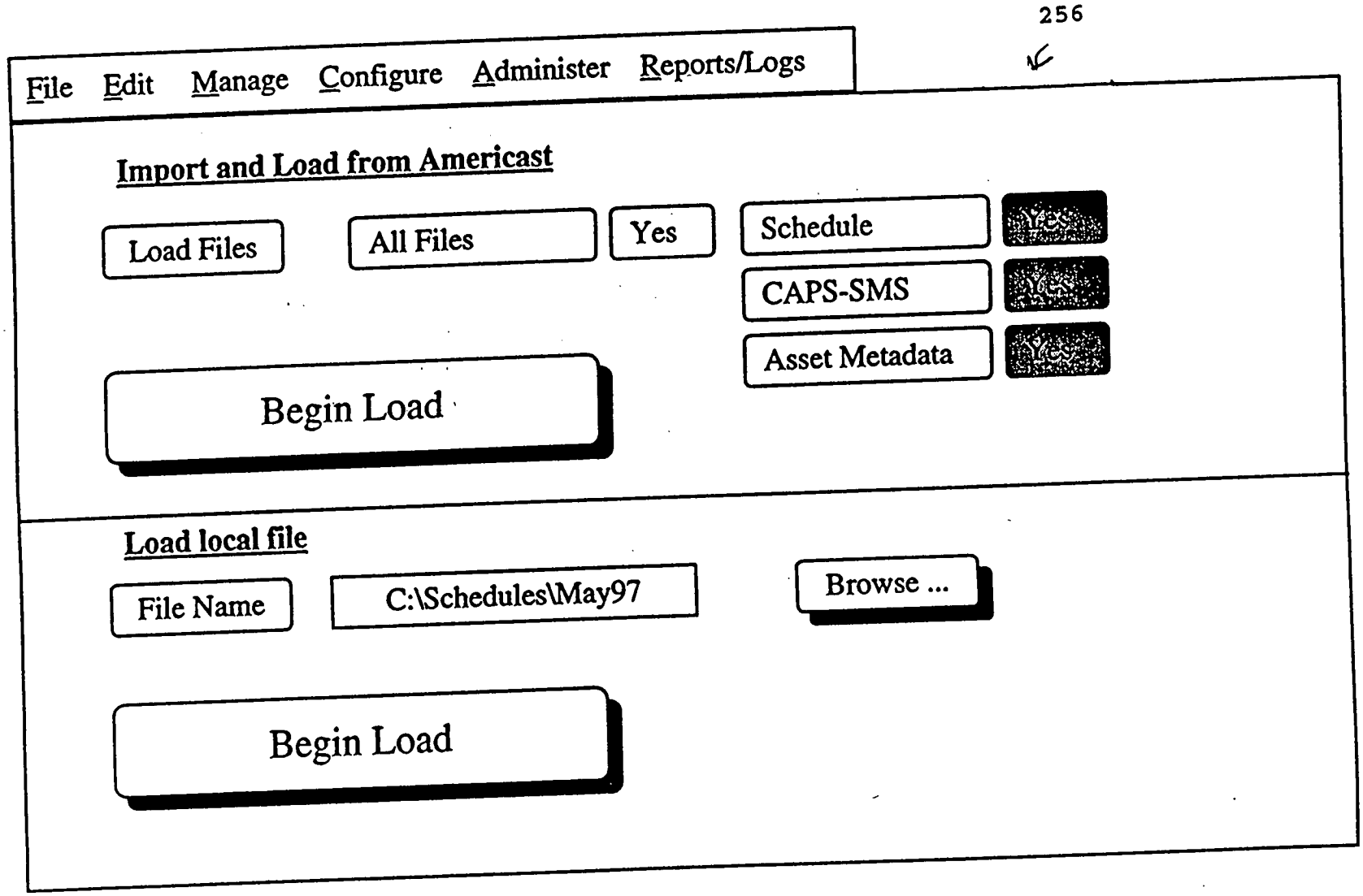


FIG. 22

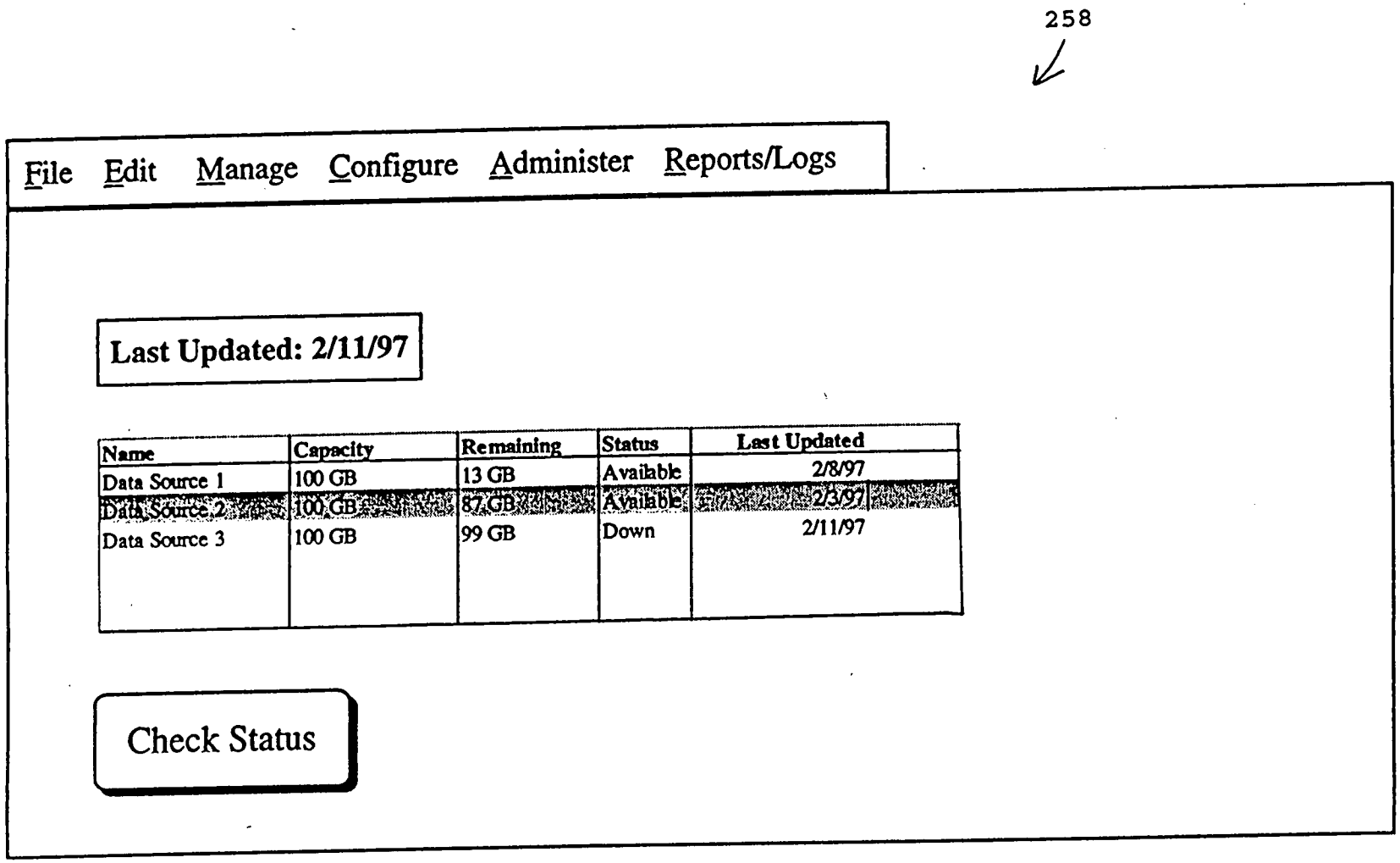

258
File Edit Manage Configure Administer Reports/Logs
Last Updated: 2/11/97
Name | Capacity | Remaining | Status | Last Updated
Data Source 1 | 100 GB | 13 GB | Available | 2/8/97
Data Source 2 | 100 GB | 87 GB | Available | 2/3/97
Data Source 3 | 100 GB | 99 GB | Down | 2/11/97
Check Status

FIG. 23

86E027 E25H0260

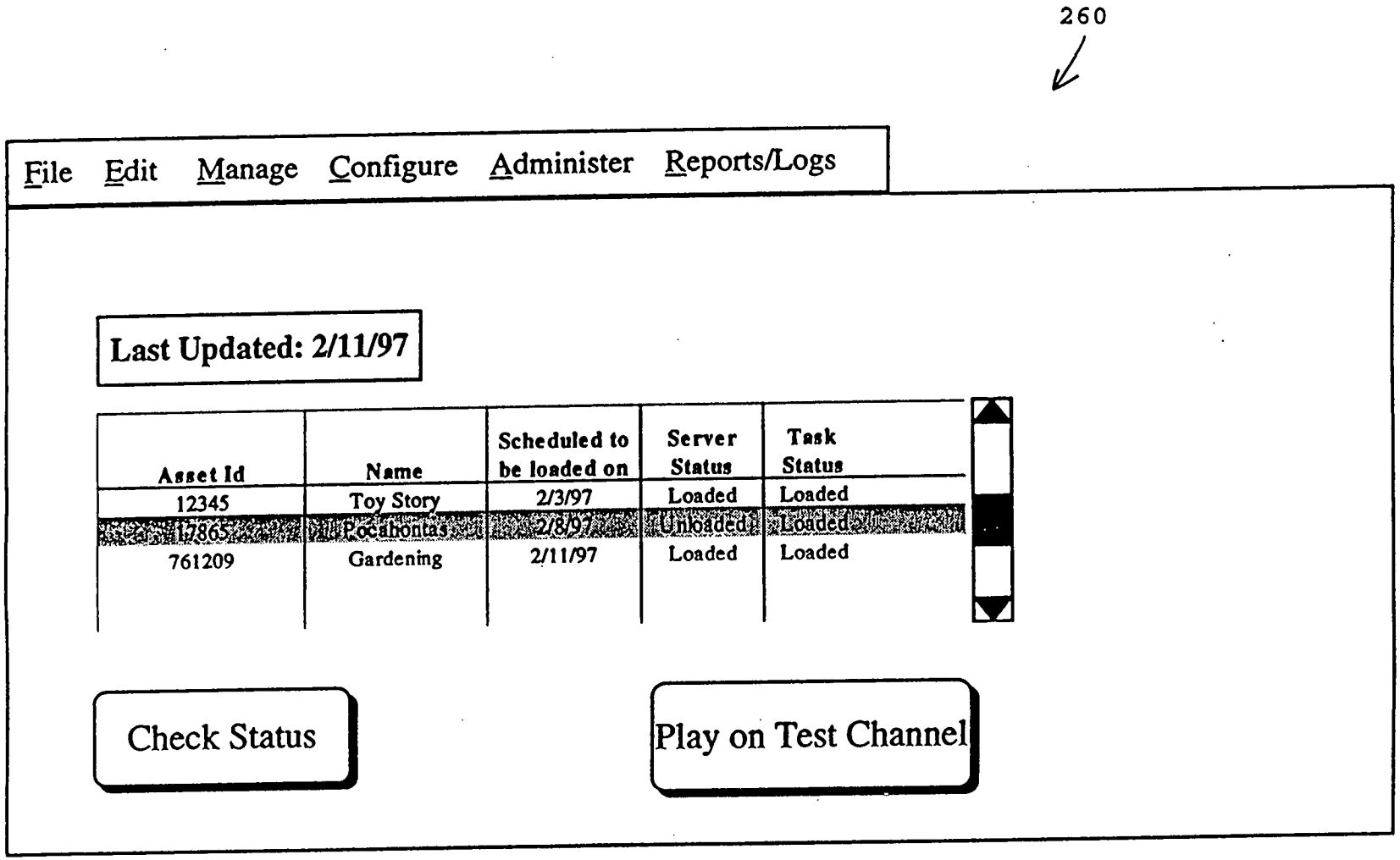


FIG. 24

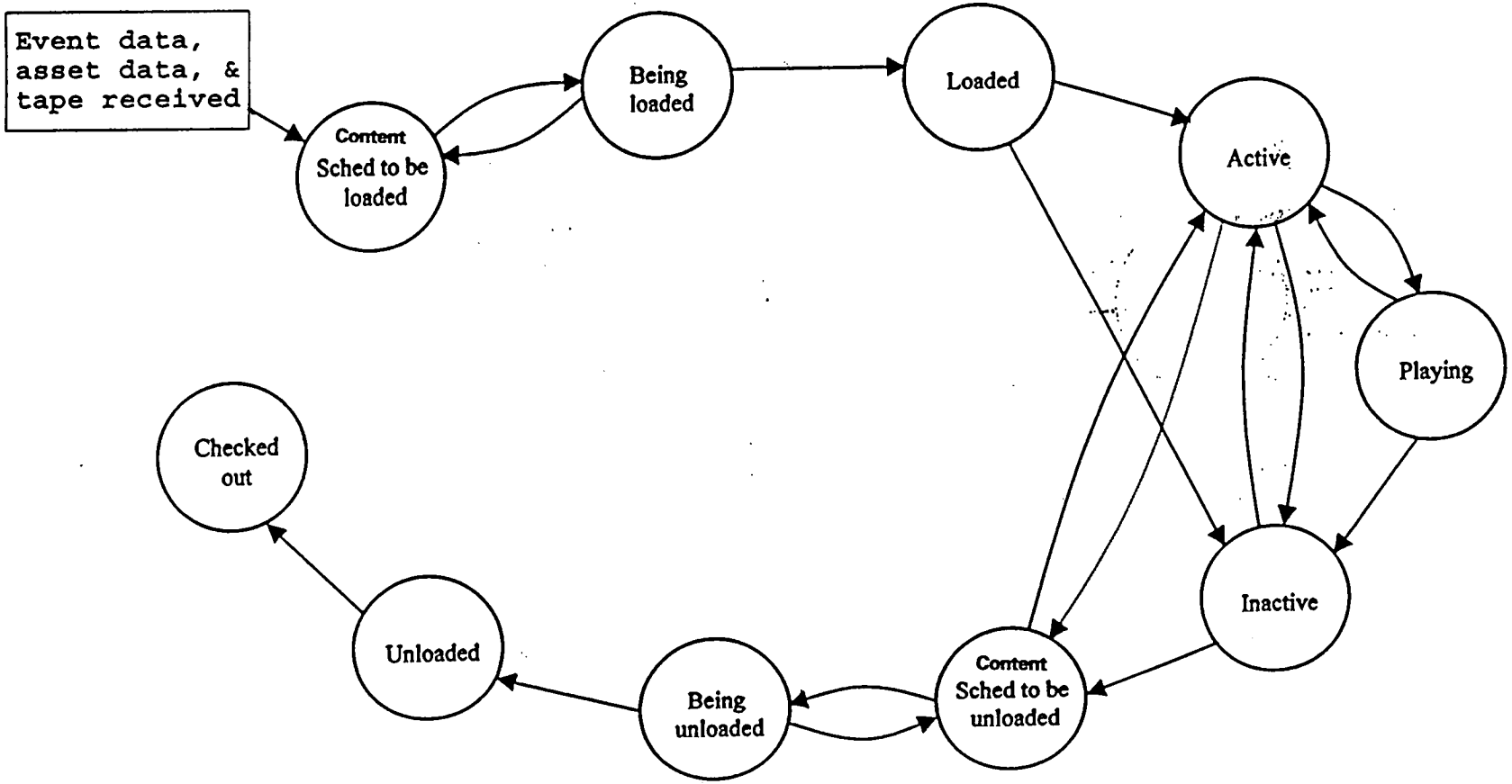

Event data, asset data, & tape received
Content Sched to be loaded
Being loaded
Loaded
Active
Playing
Inactive
Content Sched to be unloaded
Being unloaded
Unloaded
Checked out

FIG. 25

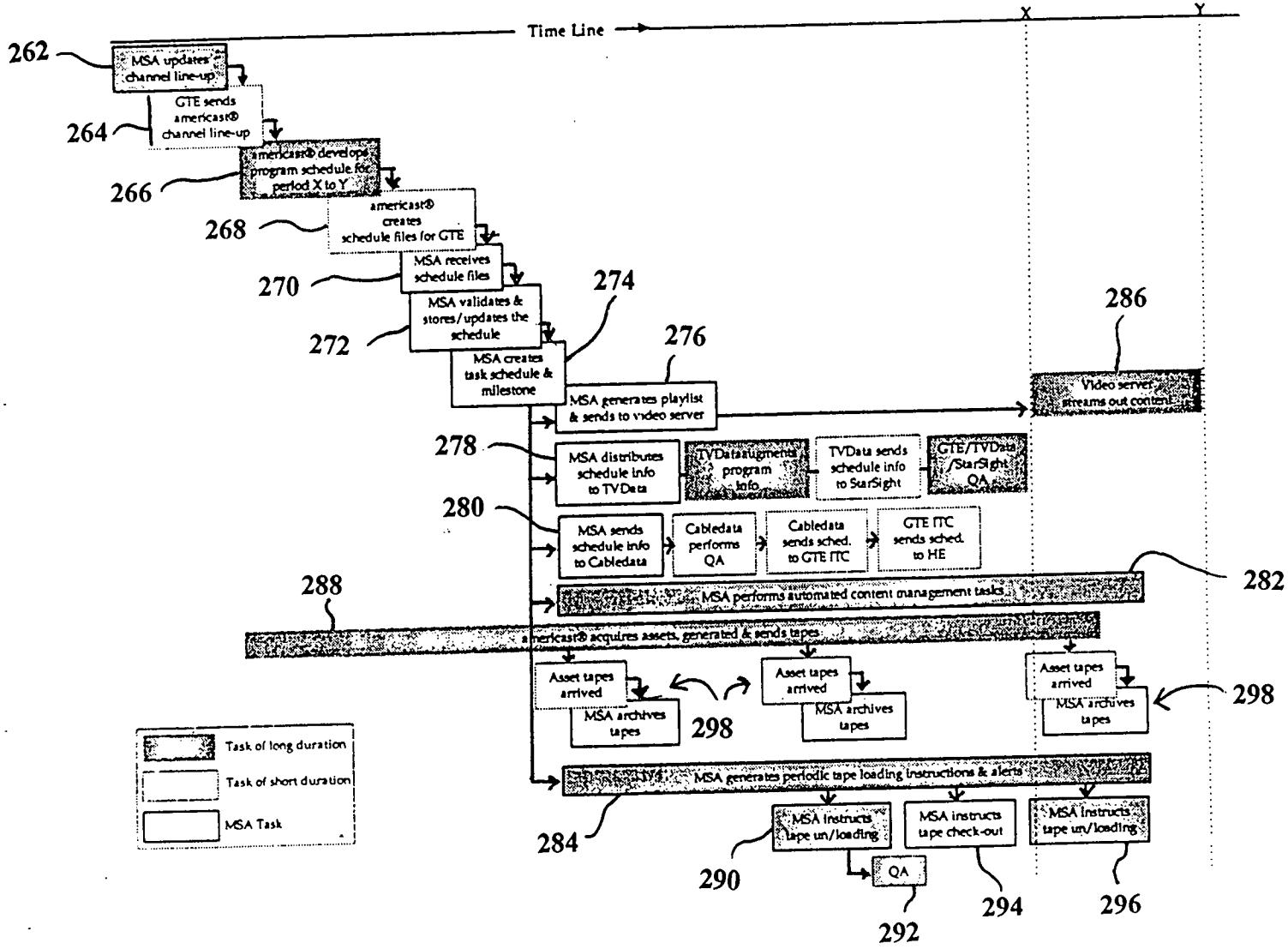
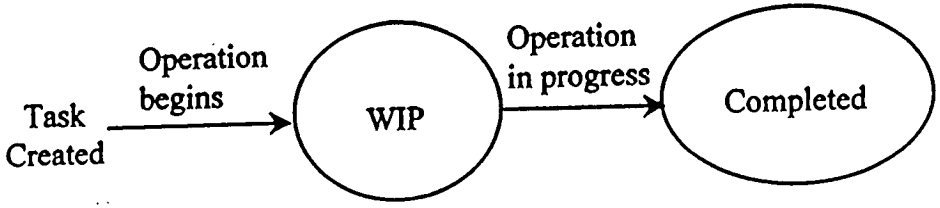

Time Line
X
Y
262
MSA updates channel line-up
GTE sends americast® channel line-up
264
americast® develops program schedule for period X to Y
266
americast® creates schedule files for GTE
268
MSA receives schedule files
270
MSA validates & stores/updates the schedule
272
MSA creates task schedule & milestone
274
MSA generates playlist & sends to video server
276
Video server streams out content
286
278
MSA distributes schedule info to TVData
TVData augments program info
TVData sends schedule info to StarSight
GTE/TVData /StarSight QA
280
MSA sends schedule info to Cabledata
Cabledata performs QA
Cabledata sends sched. to GTE ITC
GTE ITC sends sched. to HE
282
MSA performs automated content management tasks
288
americast® acquires assets, generated & sends tapes
Asset tapes arrived
MSA archives tapes
298
MSA generates periodic tape loading instructions & alerts
284
MSA instructs tape un/loading
MSA instructs tape check-out
MSA instructs tape un/loading
290
QA
292
294
296
Task of long duration
Task of short duration
MSA Task

FIG. 26

86E027" E25h0260

FIG. 27



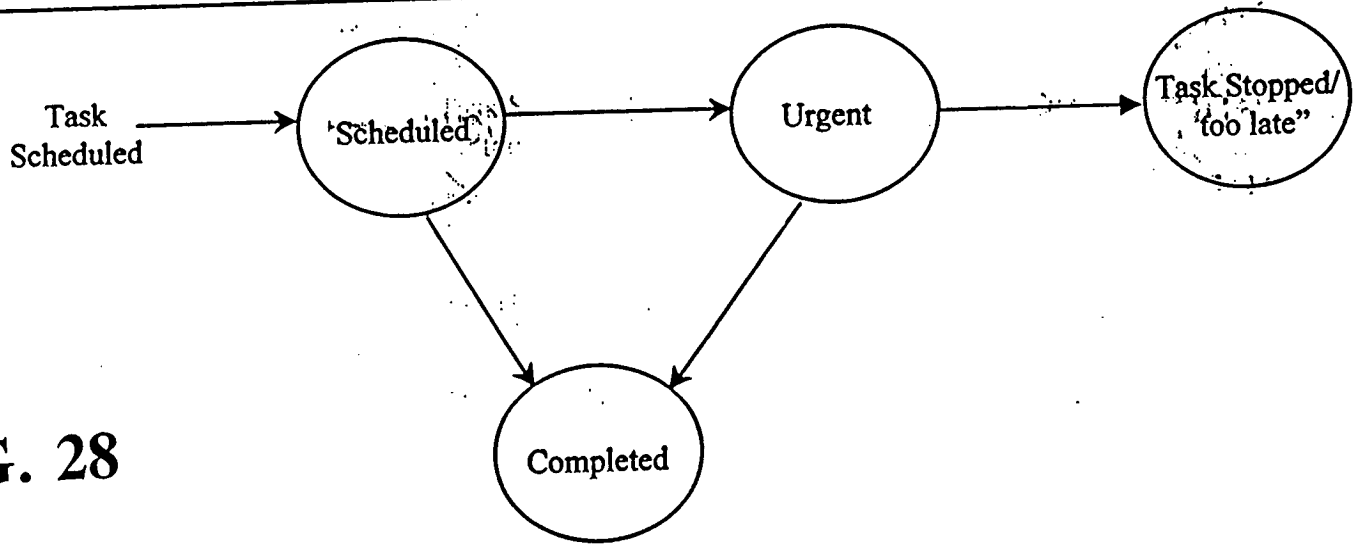


FIG. 28

B6E02T "E25H0260

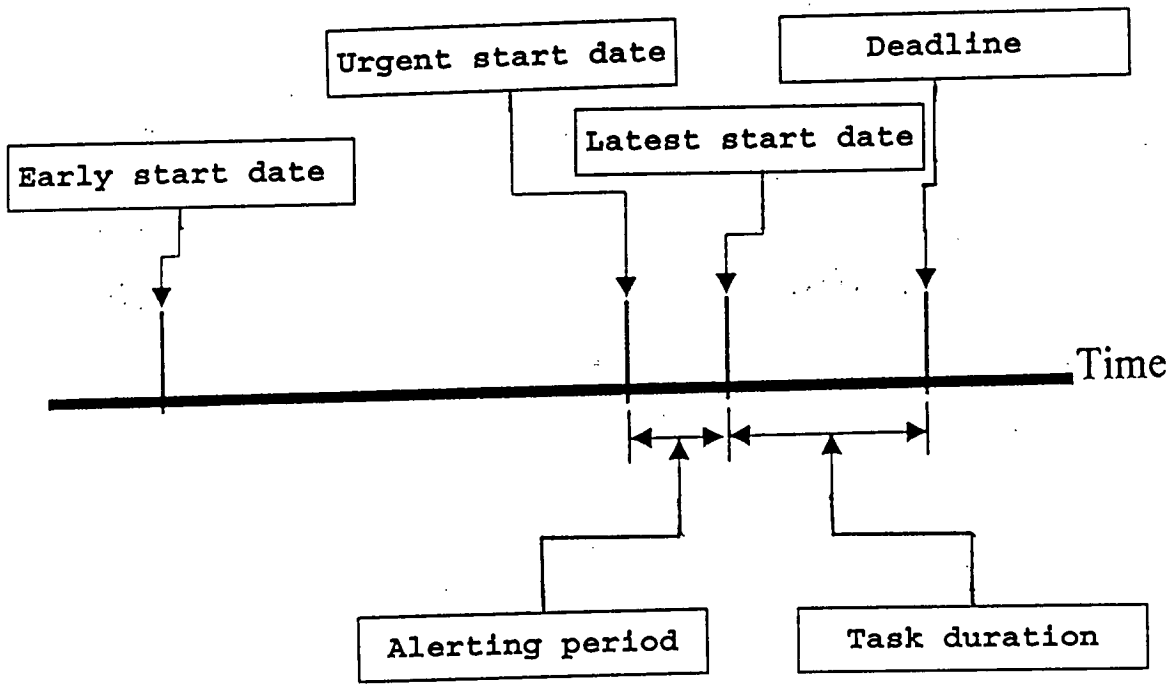


FIG. 29

86E027" E254026D

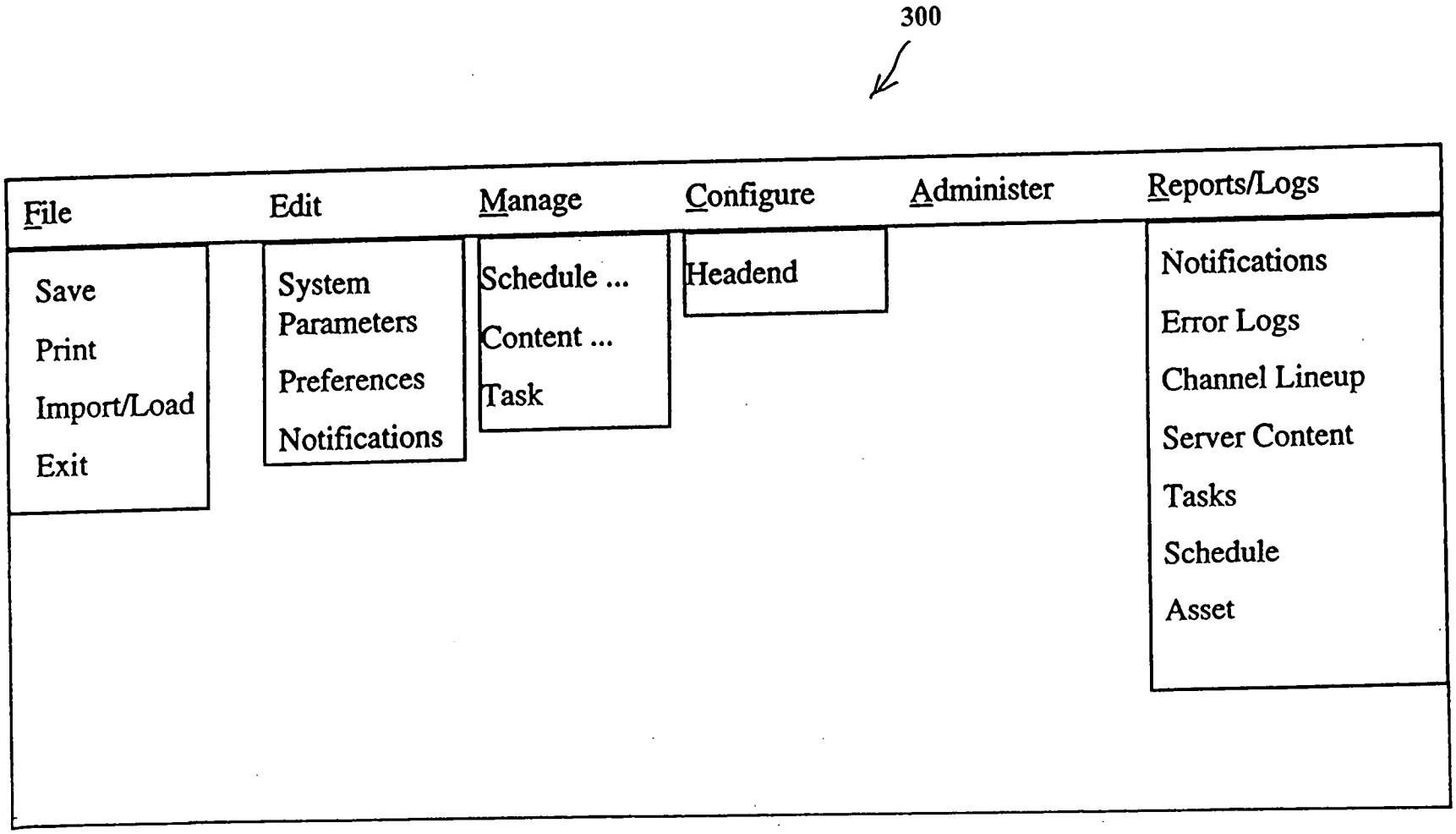


FIG. 30

86E027 "E25h0260

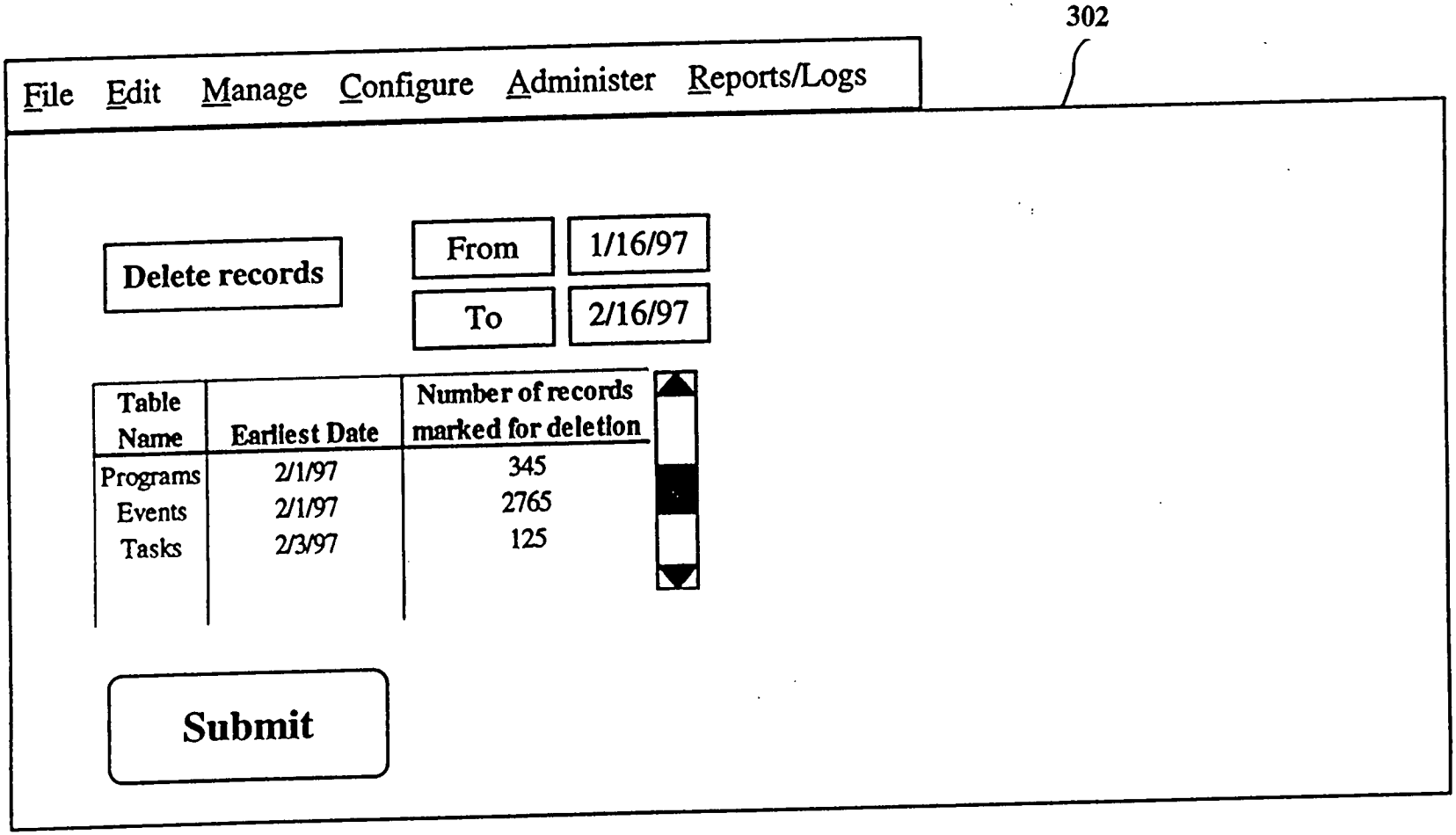


FIG. 31

86E02F "E25h0260

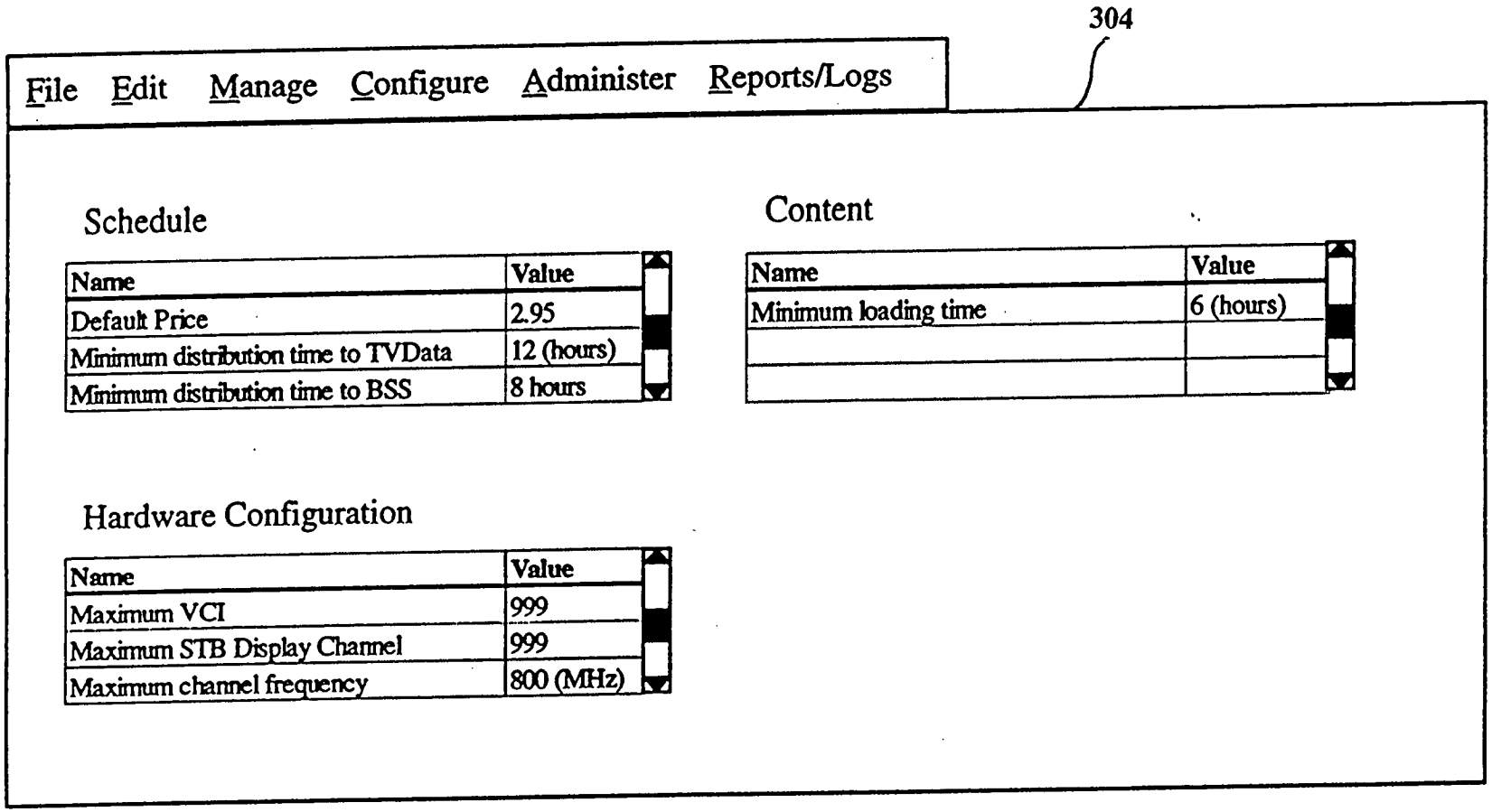


FIG. 32

86E027 "E25h0260

306

File Edit Manage Configure Administer Reports/Logs

Id	Module	Event	Normal/Alert	Notify GUI (Y/N)	Send to printer (Y/N)
1	Schedule Management	Schedule could not be validated	Alert	Yes	Yes
2	Schedule Distribution	System cannot communicate with TVData	Alert	No	No
3	Content Management	Asset not loaded on video server by due date	Alert	Yes	No
4	Schedule Management	Schedule has been changed	Normal	Yes	Yes

FIG. 33

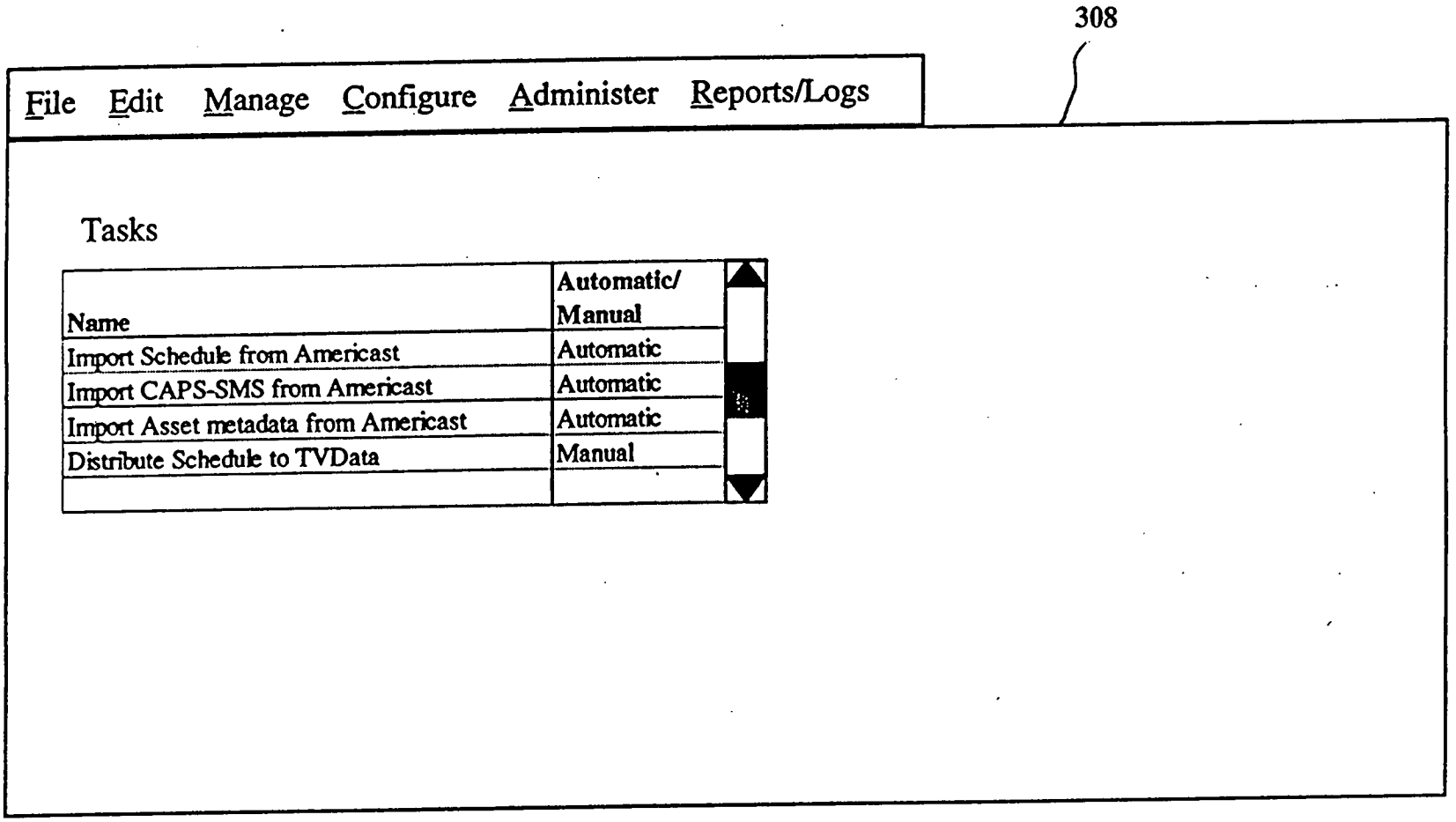

308
File Edit Manage Configure Administer Reports/Logs
Tasks
Name
Automatic/ Manual
Import Schedule from Americast
Automatic
Import CAPS-SMS from Americast
Automatic
Import Asset metadata from Americast
Automatic
Distribute Schedule to TVData
Manual

FIG. 34

86E02T" E25H0260

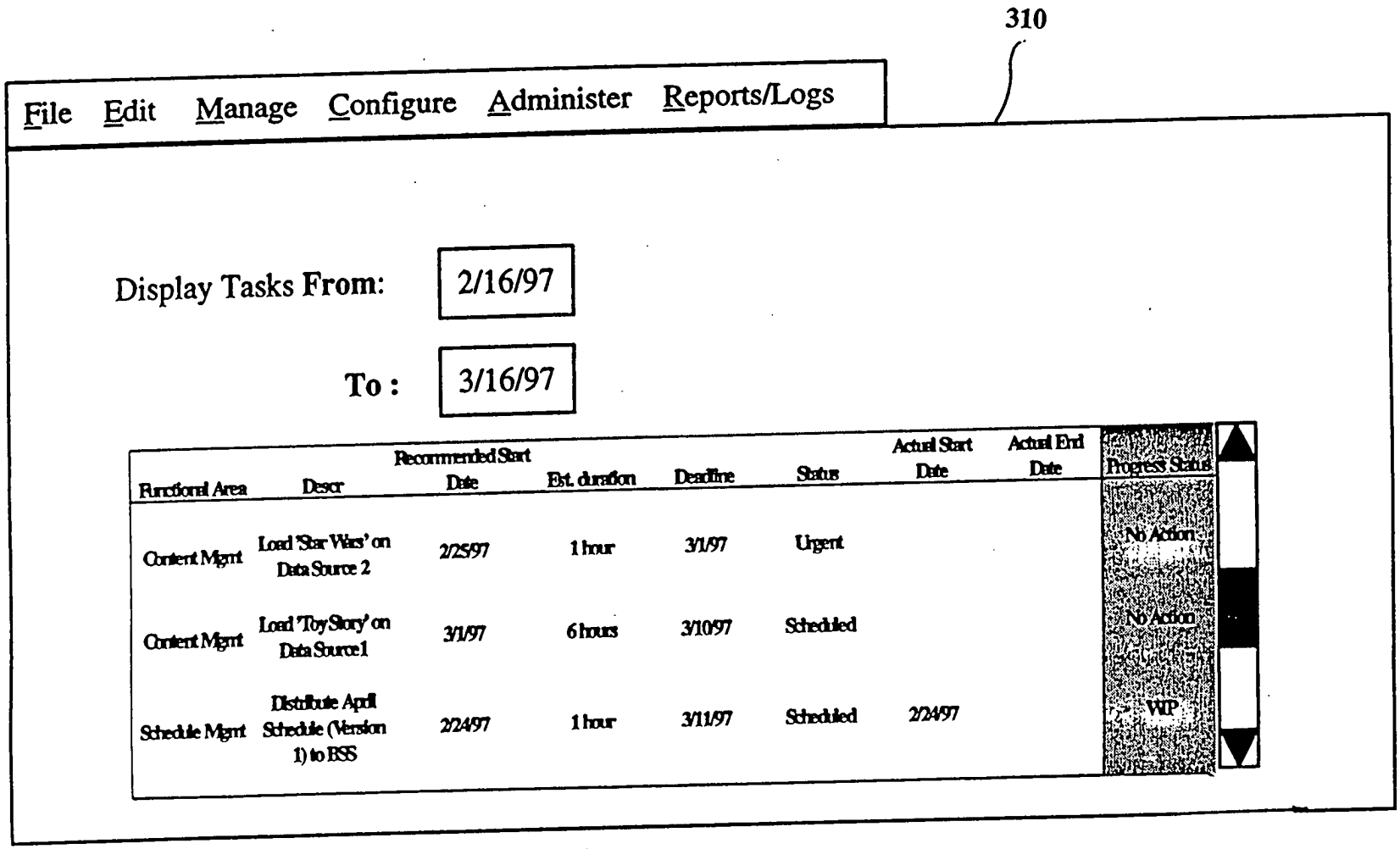


FIG. 35